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The Oil Man's Calendar

MAY 22	Kentucky Oil & Gas Association, Lexington, Kentucky.
JUNE 6	American Petroleum Institute, Illinois Basin Chapter, Robinson, Illinois.
6	Illinois-Indiana Petroleum Association, Robinson, Illinois.
8–11	American Society of Mechanical Engineers, Cleveland, Ohio.
SEPT. 16–18	National Petroleum Association, Atlantic City, New Jersey.
OCT. 8–10	Texas Mid-Continent Oil & Gas Association, Dallas.
19	National Stripper Well Association, Wichita, Kansas.
20–22	Independent Petroleum Association of America, Wichita, Kansas.
NOV. 9–13	American Petroleum Institute, Chicago.

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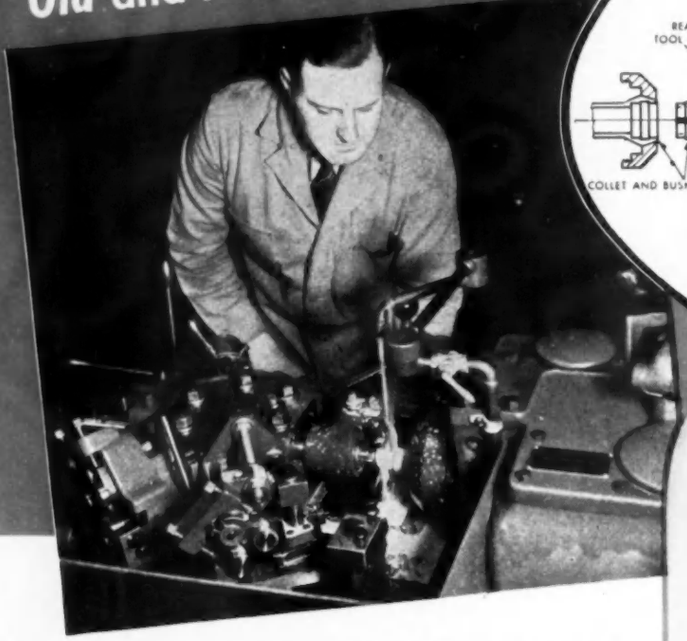
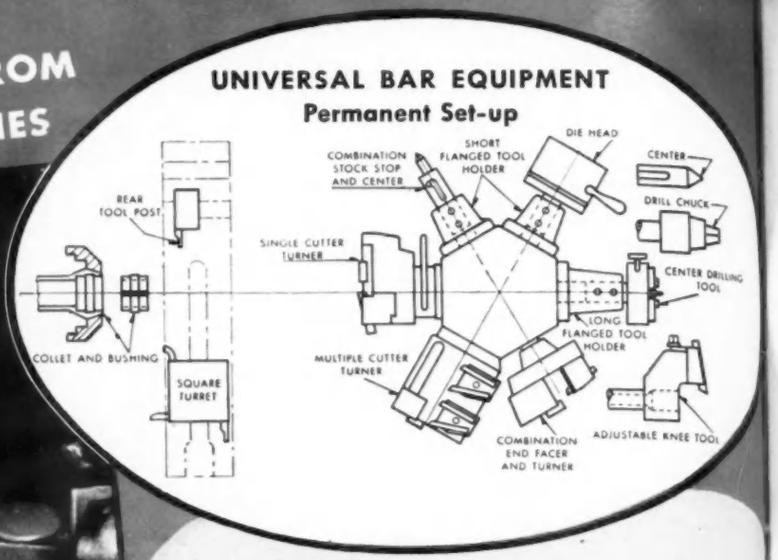
GET MORE PRODUCTION FROM Old and New TURRET LATHES





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- **A.** 1 Single Cutter Turner or Universal Bar Turner
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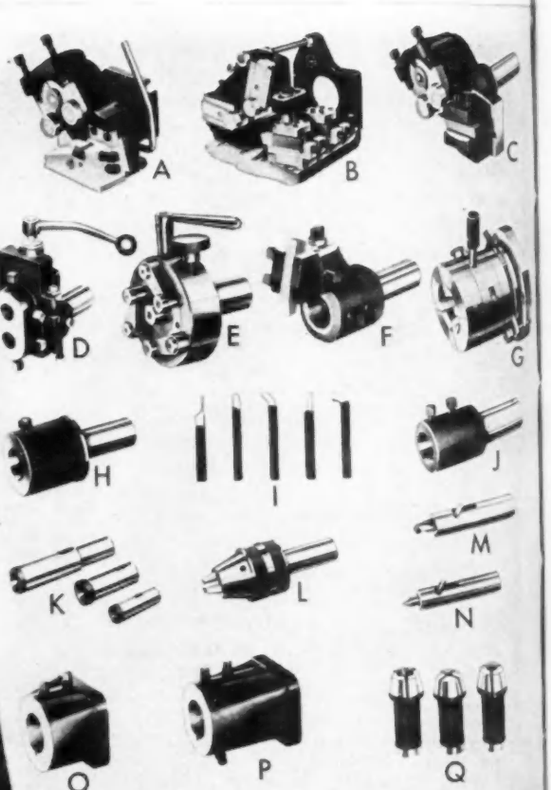

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The Changing Panorama

Some Idea of What's Ahead in Taxation

FIGURES compiled from first-quarter reports of 11 oil companies show that those concerns set aside 40 percent of their net income for paying federal income taxes for the period. The 11 companies reported combined net income before federal taxes amounting to $40,132,611, and out of that total they set aside $15,855,098 for federal income tax, after which $24,277,513 remained as profit.

The provisions for taxes necessarily were tentative and subject to revision, as they had to be estimated as best they could, in absence of knowledge how the Revenue Act of 1942 would read when passed. Some companies estimated taxes on the basis of the 1941 act and set up an additional reserve for increased rates, while others attempted to evaluate more exactly the effect of tax proposals contemplated in Congress.

The comparatively large proportion of income set aside for federal income taxes reflected the impending further climb of tax rates, through which the industry has been setting aside each year an increased percentage of earnings. On the basis of the experience of over 30 oil companies, the industry devoted 21 percent of income to payment of federal income tax in 1939, 27 percent in 1940, and 32 percent in 1941.

The oil industry heretofore has been faring relatively well as regards the percentage of income absorbed by the federal income tax. For 83 companies of all lines, 68 percent of profits were reserved for federal taxes in the first quarter of 1942. In 1941, average earning companies used about 50 percent of net income for paying the federal incomes taxes, but in 1942 probably 65 or 70 percent will go to the tax collector.

The fact that the oil industry has been able to pay a comparatively moderate proportion of net income out as federal income tax reflects, among other factors, the circumstance that the earnings themselves have been moderate. Payments based on excess profits have been relatively light. In figuring the credit above which excess profits taxes apply, companies have the option of determining normal profit on the basis of average earnings in the years 1936-1939 or on invested capital; and in either case, profits in the industry have been usually so moderate as to permit payment of only limited excess profit taxes, if any.

Doing Big Things in A Big Way for War

"BIGNESS" in industry, which heretofore came to be frowned upon by some critics, is able to cast aside some of the disapproval under the present wartime conditions, which make some of its advantages and desirability evident.

Large steel and automobile manufacturing companies fitted into war production with amazingly gratifying results; and large oil companies, as well as small, have earned and gained the sincere praise of a member of the President's cabinet for distinguished and unselfish service in providing critically needed petroleum products and in mitigating the oil shortages that have resulted from disruption of tanker shipments.

Because of large-scale operations, it was possible for oil companies to absorb for a while much of the extra cost of transporting oils by rail instead of passing it on to the unfortunate consumers that happened to be deprived of tanker service, the losses on rail movements having been balanced out against remaining cheaper movements. (Even the large companies cannot long continue to suffer the financial losses now involved in all shipping into the East, however; and higher prices are asserted to be imperative, unless the whole economic structure of the industry is to be seriously weakened.)

Because of the heavy investments made in tankers by the larger oil companies, the Navy has been able to requisition from those companies the modern, large, and fast tankers that it has needed; and older tankers as well as those under construction for oil companies will be similarly available for the herculean job of supplying oils to fighting forces of the United Nations throughout the world.

Because of knowledge gained through research and experience accumulated through peacetime operations that involved heavy capital investments, oil companies developed and were able to go into production of products that are indispensable in winning the war.

Through the smoke of war there looms, for the discerning, a better realization that large American companies, including oil companies, are in a sense symbolic of the American nation and the American people.

Thousands of American citizens have put together portions of their available capital to establish and operate the companies that now are doing the things that urgently need to be done for those stockholders and also for all their fellow citizens.

In a limited way, the American corporation represents all that the American government represents, being an enterprise in which American citizens have joined hands for working constructively together.

Our Loss Today Will Be Tomorrow's Gain

THE United States synthetic rubber construction program, which already totals 800,000 tons annual capacity, soon may be raised again—perhaps to 1,200,000 tons. In addition, strenuous effort is being made to boost Brazilian production, and large-scale domestic planting of guayule and Russian koksagyz (dandelion) rubber-yielding plants is planned.

Thus the United States may be producing rubber at a rate equivalent to the world's former production level, and nearly twice its own normal consumption requirements, which averaged 600,000 to 650,000 tons yearly prior to the war, but rose to 766,000 tons in 1941 because of expanded military needs on top of heavy civilian use. Therefore, it seems astounding that little hope is held for civilian automobile tires even after most of the synthetic rubber plants are operating, and many believe there will be an abundant rubber supply for civilian needs by 1944 or at least 1945.

Some even fear the nation is overbuilding its rubber sources.

The truth of the matter is that few realize the astounding rubber needs of armed forces, and that the United States of necessity must become the supply source for all Allied Nations.

By the end of 1943, when the country's production of rubber probably will be slightly larger than its normal requirements, every ounce of the nation's rubber stockpile will be gone despite careful conserving and military needs may have so increased that they will be equivalent to normal peacetime needs. The average passenger car tire requires 14 pounds of rubber, which compared with a few military needs shows the prodigious requirements of the latter. Into every new battleship goes at least 75 tons of rubber, or the equivalent of 17,143 automobile tires. A single 10-ton pontoon bridge eats up 3200 pounds of rubber, or 128 regulation tires. Each 12 x 20 "run flat" tire on combat cars takes 152 pounds, or 11 passenger car tires. The 8 tires on 4.7-inch motorized anti-aircraft guns use 2242 pounds, enough for 160 tires. A medium size tank uses 1½ tons in the treads, plus padding inside and lots of insulation for wiring. Before being increased recently, the Army was buying 1,231,224 rolls of adhesive plaster, which at 2.01 pounds per roll represented 24,624 pounds of rubber, or 1759 tires. An Army raincoat requires over two pounds, and every soldier must have a raincoat, which on the basis of 6,000,000 men would be over 12,000,000 pounds of rubber. To bullet-proof the gasoline tank on a flying fortress requires 1246 pounds of rubber, while a military scout car needs 398 pounds. Fighting aircraft need from 33 to 96 pounds for tires.

Much of the United States rubber will go to its Allies in planes, trucks, tanks, medical supplies, etc., but in addition considerable crude rubber must be shipped to Allied countries.

Faced with large military requirements and the task of supplying Allied countries, the United States needs a much larger supply than its normal requirements despite restrictions on civilian use. Therefore, no tires for civilians.

However, from a long-range view, the big rubber construction program means the United States is to be the world's largest producer and seller of rubber instead of the biggest buyer. The scorched rubber plantations of the Far East will never again hold their dominant position. Because petroleum and gas industries are to supply the basic ingredient for much of this country's rubber output, this is of vast significance to these businesses. Temporarily hurt severely by curtailment of automobile travel, they will gain in the long run through development of a new important market.

Of the estimated 8½ million automobiles in the 17 coastal states and the District of Columbia, one third are expected to be classified as used for "non-essential" purposes. Therefore, they will receive an allotment of but 21 gallons of gasoline during the 47-day period from May 15 to July 1, or enough to travel an average of 7 miles daily. After that a regular system of gasoline rationing will be established on "essential" needs. Many owners will just lock their garage doors for the duration.

APPLICATION FOR GAS RATIONING CARD

Form OPA R-600

B

UNITED STATES OF AMERICA
OFFICE OF PRICE ADMINISTRATION

APPLICATION FOR GASOLINE RATION CARD
"B-1," "B-2," "B-3"

The owner or person entitled to possession of a motor vehicle (or his authorized agent) may apply for a Class "B" gasoline ration card. Application for such card should be made by filling out this form. A separate form must be filled out for each motor vehicle for which a ration card is desired. At the time of executing this form, the registration card of such motor vehicle must be presented.

DO NOT WRITE IN THIS SPACE

Date .....

City ..... State .....

Ration Card No. .....

(Print Plainly or Type)

1. Owner's name ..... Date.....
2. Owner's residence address ..... (R. F. D. or street number) (Phone)
..... (City or post office) (County) (State)
3. Owner's business address ..... (R. F. D. or street number) (Phone)
..... (City or post office) (County) (State)
4. What is the exact nature of your work? ..... ("Work" means gainful occupation)
5. Describe below the motor vehicle for which you desire a ration card:

Make	Body Style	Engine No.	Vehicle License No.	State

6. If you drive to your work, what is the shortest mileage from your home to your regular place of work or commuting point? .....
7. How many miles do you drive each working day in carrying on your work (other than from home to work and back)? .....
8. What is the total average daily mileage customarily driven in the car described above to get to and from work and to carry on work? .....
9. Are you making every possible effort to reduce this mileage by using public transportation and by "doubling-up" with your neighbors? ..... (Yes or No)

I CERTIFY that the motor vehicle described above is in use and that each of the foregoing statements is true, and I further certify that the gasoline obtained with the ration card issued on the basis of this application will be used solely in the motor vehicle described herein and will not be used for any other purpose.

Section 35 (A) of the United States Criminal Code makes it a criminal offense, punishable by a maximum of 10 years' imprisonment, $10,000 fine, or both, to make a false statement or representation to any Department or Agency of the United States as to any matter within the jurisdiction of any Department or Agency of the United States.

Signed .....
(Applicant or agent)

.....
(Address of applicant or agent)

THIS APPLICATION IS SUBJECT TO THE VERIFICATION OF YOUR LOCAL RATIONING BOARD

Save Gasoline and Help Win the War

★ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—2(6e)-1

—International News Photo

GASOLINE APPLICATION FOR AN ESSENTIAL USER

Above is a sample of the application for essential users of gasoline, such as defense workers, doctors, public service officials, etc. Five types of applications are being used and five types of cards issued to motorists in the 17 Eastern states, the District of Columbia, and the states of Oregon and Washington, under the rationing program put into effect May 15.

☆ ☆ ☆ ☆ WASHINGTON ROUNDUP ☆ ☆ ☆ ☆

By B. F. LINZ
Washington Correspondent

Pipe Line Program to Relieve East Coast Outlined

WPB May Force Texas to Adhere to OPC Production Quota

Extend P-98 Until July 1 When New System Likely

Ickes Condemns Florida Canal and Pipe Line Ideas

☆ ☆ ☆ ☆

A NINE-POINT pipe-line-construction program designed to ease an oil-starved East climaxed a week in which oil remained steadily in the spotlight as Congress raged over rationing and an harassed price administrator was forced to give ground before irate legislators and aroused mothers.

Originally confident that one third of the Eastern motorists would take "A" cards limiting them to three gallons of gasoline a week, Henderson revised his views radically when early reports indicated that 90 percent of the car owners were demanding higher rations and "X" cards for unlimited supplies were being granted by the thousand.

Members of Congress got "X" cards by claiming they used their cars for official business and the Senate indignantly rejected a motion by Senator Downey of California declaring that members would not abuse the regulations which, one member commented, was like promising to refrain from train robbing.

Mothers who visioned their "babies" walking highly-traveled roads to schools were not less vocal, and forced a concession of extra coupons. Motorists who used their cars to go to and from their work asked and were given "B" cards, and the Washington *Post* printed a cartoon of a man asking for an "A" card with the registrar and the other applicants fainting.

Motorists charged that the rationing was a political move and members of Congress made political capital out of it. Henderson, retreating under the barrage, offered concession after concession, among other things eliminating the 50-mile "twilight zone" which was to prevent rationed motorists from crossing the line into unrationed territory to fill their tanks.

OPA officials said they would check applications and pointed to the penalties for getting or using more gasoline than a person was entitled to, but cooler heads realized the impossibility of acting against a great majority of the East's motor car owners.

Coordinator Ickes expressed relief at, for once, being out of the range of fire where oil was concerned, and ordered quick action on the pipe-line program recommended at the May meeting of the Petroleum Industry War Council.

The industry also won the first round of its fight against Treasury proposals to eliminate or reform the depletion provisions when the House Ways and Means Committee, by 21 to 4, voted to leave the depletion and option sections of the law untouched.

Ickes Favors Subsidy To Cover Higher Costs

Companies incurring additional costs as a result of war demands should be compensated by government subsidy and not through higher prices on consumers, stated Coordinator Ickes last week.

"The oil companies are carrying very heavy losses which have not been compensated for. We have taken the position here and represented to Mr. Henderson that they ought to be compensated for all the extra cost they can show and I think the disposition of the government is to do that, but there are some elements of cost that have not been taken care of yet. We feel that these other costs ought to be taken care of by the treasury.

"While the companies have been able to recoup the extra costs of tank car transportation by the three price increases which have been granted, still further increases may be necessary as the amount of oil moved by rail increases. The present price, it is estimated, will offset an additional expense of $79,000,000 a year.

The "other costs" include the higher expense for war risk insurance estimated at $200,000,000 and the cost of readjusting refinery procedures to get more fuel oil and less gasoline, which has not been estimated.

The rail costs have been covered by price increases only in the East; no advances have been granted in Oregon and Washington but they undoubtedly will come.

"I think these are general overall costs of war which the country as a whole ought to bear instead of the consumers in this area." The question of a subsidy has been "actively discussed" with Henderson.

OPC is still having "some difficulty" in California and Illinois with M-68 problems "but we are handling those. We can make individual exceptions where necessary and are doing so."

Stories of burning of gasoline are a "damn scandal." Specifically Ickes referred to a story that 2,000,000 barrels of gasoline had been burned in Chicago because of lack of storage space. Story came originally from a government official. Actually, application to burn the gasoline was submitted but was denied.

Davies also was indignant over the report which, he said, was "completely without foundation. The storage situation in that area is not one which would require any such action on the part of any company or individual," he said. "Furthermore, this office would oppose

with all the power at its command the taking of any such step. Supplies of motor fuel in the Chicago district have been ample, but demand has been sufficient to prevent any undue increase in storage. In fact all the indications are that gasoline inventories will be shrinking shortly in that section."

WPB Has Power to Halt Excess Texas Output

Refusal of the Texas Railroad Commission to follow OPC recommendations for production could be dealt with by orders of the War Production Board halting output in excess of the recommended volume, Ickes told a press conference May 14.

The coordinator's statement was in no sense a threat, but was an answer to a question how the Administration could handle the situation if the commission balked at accepting the OPC allowables.

While members of his staff shuddered over the headlines they pictured in the Texas papers, Ickes, who never dodges a question, spoke freely of what might be done if necessary, but gave no indication that he viewed the present Texas situation as a prelude to wilful refusal to accept his recommendation.

Deputy Coordinator Davies, present at the conference, explained that the Texas commissioners have "delayed" accepting the recommendation and called a special hearing, meanwhile temporarily continuing the April level of production.

Davies said OPC has not yet had final word as to the commission's action, and maintained that "it would not necessarily follow that production would continue even if the commission continued the allowable." Ickes, in response to a question by Ray L. Dudley, publisher of THE OIL WEEKLY, who had joined the newspapermen in the conference, agreed that the pipe line situation would take care of the problem, and that the lines probably would be unable to move more than the allowable.

However, the coordinator said, if there was no compliance, he could ask WPB to issue an order imposing penalties on producers for output in excess of OPC recommendation and, he added, the board "could even issue an order enforceable against the railroad commission."

Asked about the effect of further shutdowns on land and royalty owners and persons who had borrowed from the banks on their prospects, Ickes said "the best place to store oil you have no market for is in the ground" and expressed the opinion that the banks would eventually be paid off as the oil was brought out.

He agreed that the present situation may drive small producers and refiners out of business and, he said, "I know there are a lot of bad situations here and there but I do not think there is any formula that can take care of all of them."

P-98 Extends to July 1; New System Then

WPB, acting on the recommendation of OPC, extended Preference Rating Order P-98 to July 1 on Friday, but indicated that when midsummer deadline is reached a new system will have been developed for handling preference ratings for the oil industry.

While WPB did not explain what the new system would be, it was generally expected that the Production Requirements Plan, under which an establishment can cover all its material needs for a calendar quarter in one application, would be adopted. The board some time ago announced its intention of extending the plan to all industries by July 1.

P-98 as extended is exactly the same as heretofore in its requirement, officials apparently believing it was not worth while to introduce any changes for the short period in which the order will remain in force.

Ickes Puts Rationing Baby in OPA's Lap

Cheerfully conceding that rationing is Leon Henderson's "baby," Petroleum Coordinator Ickes, who for months sought to avert the necessity of restricting motoring, last week reminded the country that OPC has nothing to do with the "three-gallons-a-week" program laid upon "pleasure" drivers in the Eastern States.

His eyes on the tremendous backwash of gasoline troubling the Gulf Coast industry, Ickes almost to the last moment had been hopeful that the minimum ration would be at least twice that decided upon by OPA.

Following Henderson's announcement before the Cole subcommittee that three gallons a week would be the top for car owners who did not use their machines for essential purposes, newspaper reporters sought an expression of comment from the coordinator, who obliged with the following:

"It is the function of the Office of the Petroleum Coordinator to see that necessary petroleum supplies are always available to the armed forces of the United States and, so far as conditions make it possible, to see that there is petroleum for civilian use. We are working closely with the oil industry to get all possible supplies to the East Coast.

"The function of rationing those supplies after they get to the East Coast belongs to the office of Leon Henderson. The office of the Petroleum Coordinator has cooperated with Mr. Henderson heretofore and will continue to do so in all ways.

"It is his responsibility to ration. He is doing a conscientious job. We will assist him in every way that we can."

Situation Gets Hotter

Throughout the three days of registration, House and Senate had a "field day" and Henderson repeatedly backed away from a problem which steadily became hotter and hotter.

With an OPA subordinate stating publicly that Congressmen were not entitled to "X" cards because their visits to government agencies were not on government business, drawing the wrath of irate members, Henderson issued a soothing explanation that the Senators and Congressmen could have the cards if their cars were used substantially for official business.

In another clarification, the OPA chieftain soothed housewives who demanded to know how they would get their children to school without automobiles, announcing that extra rations would be provided for that travel where necessary.

Meanwhile, it was made known that Oregon and Washington also would come into the card-rationed area June 1, when their supplies will be cut 50 percent, as were those in the East on May 15. On the latter date also, 15 Mid-Western states felt the impact of the situation, when WPB ordered a ban on deliveries of fuel oil for use in new burners installed after June

15 or for burners converted from other fuel after June 1. Deliveries of fuel oil for use for any purpose in the curtailment areas was simultaneously ordered cut by 50 percent.

As the week ended, the picture of rationing after July 1 was still clouded, with no responsible officials willing to say whether the permanent program would be confined to the shortage areas, extended to adjacent sections or made national in scope.

From the standpoint of oil alone, Coordinator Ickes said May 14, there is no need for extension beyond the presently rationed area but, he added, a great deal depends on whether the government decides it will use rationing as a means of saving rubber.

The rationing just introduced may last as long as the war, Ickes said. "It depends on a good many factors," he explained, "and is pure speculation. Can we build up the tanker receipts, if so how soon and to what extent; are we going to have a pipe line sooner or later? I don't know the answers to those questions myself."

The "big-inch" pipe line, the coordinator said, is the only "sure solution" of the supply problem of the East. It would help to have convoyed tankers bringing in oil, he admitted, but convoying "takes a lot of ships and there is no absolute guaranty that submarines cannot pick up merchant ships that are being convoyed." However, he added the matter has been discussed with the Navy.

Ickes reported that the railroads still continue to move oil in large volume, during the week ended May 12 a total of 46,350 cars being in service, delivering 652,000 barrels a day.

Ickes Blasts Inland Waterways Proposals

Proposals from the capitol that the industry and OPC go all out on the development of river and inland-waterway transportation are meeting with little sympathy among oil officials, it was indicated May 14 by Coordinator Ickes.

Expressing concern over the "unfortunate" reports regarding large quantities of available barges and the effect on the mind of the public, the coordinator declared he has

[*Continued on page 42*]

Nine-Point Pipe Line Program Covered in OPC Recommendation

A nine-point pipe line program, based on the Tulsa conference of the temporary joint pipe line subcommittee last March as modified by subsequent studies by engineering committees and approved by PIWC at its May meeting, was outlined to the industry by Coordinator Ickes at the end of last week in Recommendation No. 49.

Given clearance by Assistant Attorney General Thurman Arnold, the construction schedule is aimed at making the East Coast area independent of tanker transportation.

Prosecution of the program would be under the jurisdiction of a temporary joint pipe line managing subcommittee and a temporary joint pipe line engineering subcommittee as to be designated by the chairmen of the general committees for Districts 1, 2 and 3 with the approval of the coordinator.

The managing committee is to prepare plans for the construction, financing and operation of the recommended projects and such others as may be later developed, and the engineering group is to handle the engineering studies and investigations that may be required.

As set forth in the recommendation, the program is to include:

1. An increase of 25,000 barrels per day in the movement of crude from Texas north and east through existing pipe-line systems, by means of the installation of additional pumping units, loop lines, and the reversal of the Tuscarora pipe line.

2. (a) Construction of a 60,000-barrels-per-day pipe line from the vicinity of Beaumont to Baton Rouge, to supply the Plantation Pipeline; (b) expansion of the capacity of the Plantation line by installation of intermediate pumping stations; (c) extension of the Plantation line from Greensboro, N. C., to a point northwest of Norfolk, Va.

3. Construction of a 15,000-barrels-per-day products line from Fostoria, Ohio, connecting the Shell and Sohio gasoline pipe lines with the Sun-Susquehanna system at Akron for the movement of products eastward.

4. Reversal of the Keystone-Atlantic gasoline pipe line and an increase in the movement through the Socony-Vacuum pipe line from Buffalo, N. Y., to feed the Sun pipe line going south.

5. (a) Reconditioning, rearrangement, and conversion of a crude pipe line or pipe lines between Port Arthur and El Dorado, Arkansas, into a products pipe line or pipe lines; the reversal of such pipe line or pipe lines, and the extension of such pipe line or pipe lines; (b) reversal of an eight-inch products line between Shreveport, La., and Port Arthur, to move products to Shreveport; (c) construction of a 150-mile 10-inch products pipe line from El Dorado to Helena, Arkansas.

6. Construction of a new 20-inch crude pipe line from East Texas to Salem, Illinois, to move 200,000 barrels per day, including construction of adequate storage tanks and loading racks at Salem and a barge terminal on the Ohio River.

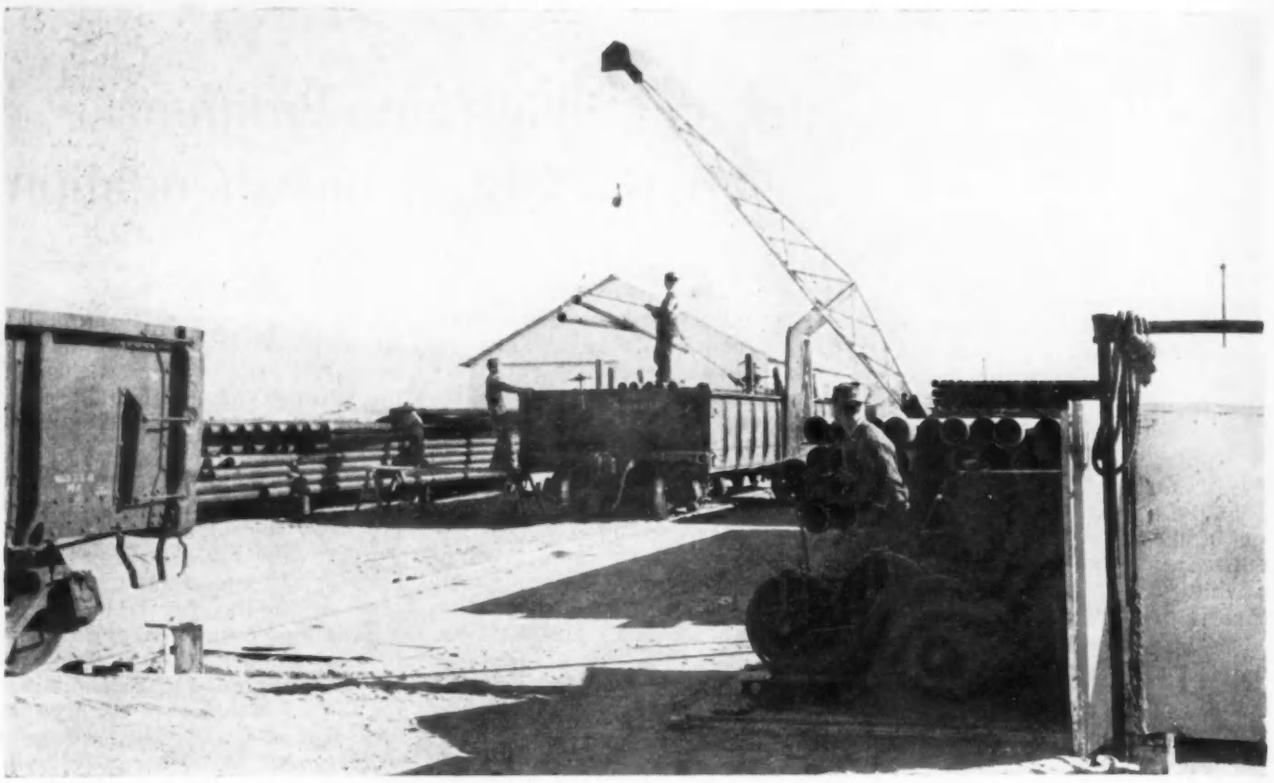
7. (a) Conversion and reversal of a 12-inch crude pipe line extending from East Texas to Houston, to deliver 60,000 barrels per day of refined products from the Houston refineries to a point in or near the East Texas field; (b) construction of a 12-inch and a 14-inch pipe line from the East Texas field or its vicinity to deliver 75,000 barrels per day of refined products to a point near Paducah, Kentucky.

8. Construction of a 24-inch crude pipe line from East Texas to Salem, with a capacity of 300,000 barrels per day, and extension of the line eastward to the refineries of the New York and Philadelphia areas to deliver 250,000 barrels of crude daily.

9. Conversion of the 20-inch pipe line specified in project 6 to a products line and the extension of the line to a point in Western Pennsylvania for connection with existing gasoline lines, or extension of the line itself further east.

The first of these projects already has been put under way and

[*Continued on page 42*]



Unloading operations have been greatly speeded up—in many cases by as much as 50 percent—through the use of this hoist and portable crane combination.

Casing Unloaded More Efficiently And Safely With Portable Crane

By GILBERT M. WILSON, Staff Writer

UNLOADING and stacking of a carload of casing in only two hours, where it formerly required at least five hours to do the same job, is typical of the savings that are being realized by a major company through use of a portable cantilever boom crane.

Unloading, and if necessary, shifting of cars on the track is accomplished by remote control from a centrally located double drum hoist, the cable being run through a unique and efficient unloading head located beside the track to permit unloading on either side of the hoist.

Filling a long-felt need in the handling of tubular goods in the warehouse division, the crane was designed and built by the equipment engineering and machine shop staffs of the company. The approximately two years of service has shown the unit to be very efficient, easily operated, and has brought about substantial savings in the warehouse department.

All-Welded, Portable Features

The boom is of all-welded cantilever construction, the arm or rigid section being 30 feet long and set at an angle of approximately 45 degrees. It was designed so that, with the crane snubbed up against one side of the railroad car, the top sheave would be slightly beyond a point directly above the opposite side of the car. Over-all clearance between the ground and the top of the sheave is 25½ feet.

The principal members of the boom are of 3-inch tubing and the cross bracing sections of 2-inch. Distance between the anchor or base and the boom support is 9 feet, and from there to the top sheave is 21 feet.

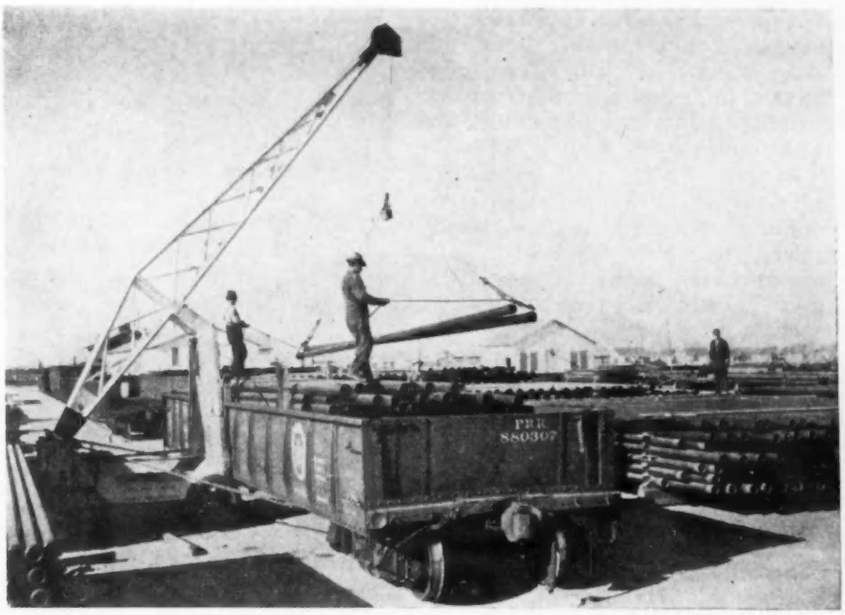
The base of the crane is essentially a 3-wheeled dolly, mounted on pneumatic-tired, 20-inch wheels. The axle of the two rear wheels is rigidly mounted on the frame, while the third wheel, mounted in a steering post, provides ample maneuverability, and when the unit is snubbed to the car, the third wheel may be turned sideways, to conserve space in the aisle-way be-

tween the racked pipe and the car. One man can steer the unit with a removable 2-inch pipe that is slipped into position in the wheel post.

Hub-to-hub width of the rear end of the crane base is 110 inches, and the length, or distance between the rear axle and hub of the steering wheel, is 120 inches.

A heavy, broad-based screw jack is placed under each of the three corners of the base to take the load off the wheels when the unit is in operation.

The principal members of the heavy base are of all-welded channel iron, the floor sections (including the sloping section above the steering wheel) being 12-inch, and the vertical sections 10-inch. Flooring between the base members is welded on the bottom side, but is made up into removable sections on the top. This 12-inch space is loaded with counterweights, principally in the front or steering end, to partially offset the lifting tendency of the boom load.



Unlike a gin pole, this cantilever type crane does not require that the men be exposed to the hazards of having the loads of pipe swung up over their heads. Such a carload of pipe is now unloaded in about two hours, or about the time it normally took to hook up the gin pole hoist.

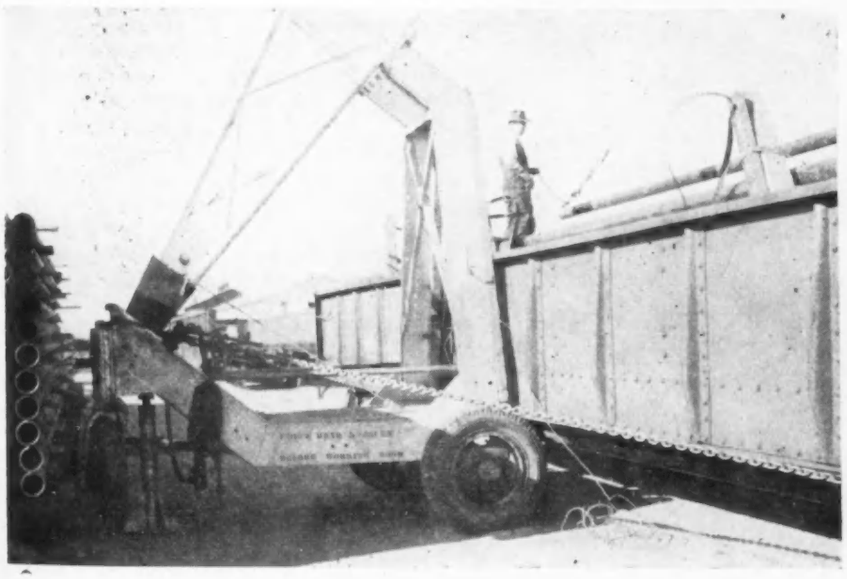
Crane Snubbed to Cars

The outer edges of the two vertical 10-inch channel sections are faced with strips of 3-inch planking to serve as a fender between the railroad car and the crane when the two are snubbed together. Snubbing chains, extending diagonally outward from both sides of the crane, and hooked into a convenient frame member of the car, are tightened with a chain jack.

The ½-inch hoisting cable, coming from the hoist some distance down the track, first goes over an 8-inch pulley below the floor in the crane base. It then comes up through a pipe guide set in the floor at a 45-degree angle, over to a 12-inch pulley in the base of the boom section, and through the center of the boom structure to the 9-inch sheave at the top. The latter is a deep sheave, to keep the line from jumping out. In addition, the greater part of the sheave is covered with a light sheet-steel housing.

Pipe is handled with a self-equalizing sling that handles two joints of pipe at a time. The crane is capable of lifting two joints of 10¾-inch seamless pipe, representing a total load of about 3000 pounds. A man at each end of the car hooks the sling ends into the pipe and with short ropes, guides the load until it is lowered to the pipe skids on the opposite side of the car from the crane. The latter are supported by special hooks that hold the ends of the planks firmly against the side of the car.

Supporting the 30-foot crane is this 3-wheeled chassis, which greatly facilitates maneuvering it about the yard. It is counterbalanced with weights placed in the false bottom of the front end. While in operation, it is snubbed to the car and jacked up off the ground to lend rigidity to unit.



Unique, Efficient Features in Hoist

The double-drum hoist faces the track and is located approximately midway between the opposite ends of the casing supply yard. The hoisting cable, 700 feet long, is spooled on the first drum. The cable on the second drum is used for other miscellaneous yard work, centering principally on the shifting or spotting of railroad cars. The hoist is powered with an automotive type 4-cylinder engine.

A unique feature of the hoist itself is the manner in which it and the assembly housing are mounted. Unlike many such hoist installations where either the hoist is operated from within the building, with a consequent lowering of visibility for the operator, or where the unit is skidded outside to be tied down to a none-too-secure base,

this unit remains permanently anchored while the shed is moved back. The steel I-beam base of the hoist is bolted to a broad concrete foundation, several feet wider in both dimensions than the hoist base.

The small all-welded sheet iron building, mounted on four small rollers, runs on a track of 2-inch pipe anchored to the concrete matting. The track extends off the matting an equal distance to the rear, making it possible to completely uncover the hoist, including the engine. Inside the well-braced building are hooks and racks on which may be hung tools and miscellaneous gear needed on various types of jobs.

Specially Designed Unloading Head

Of particular interest in connection with the smooth operation and control of the combined units is the specially designed unloading head. Inasmuch as the direction of travel of the cable must be turned through 90 degrees for the cable to approach the crane parallel to the track, some type of head, preferably removable, had to be devised which would permit the cable to pass under the tracks.

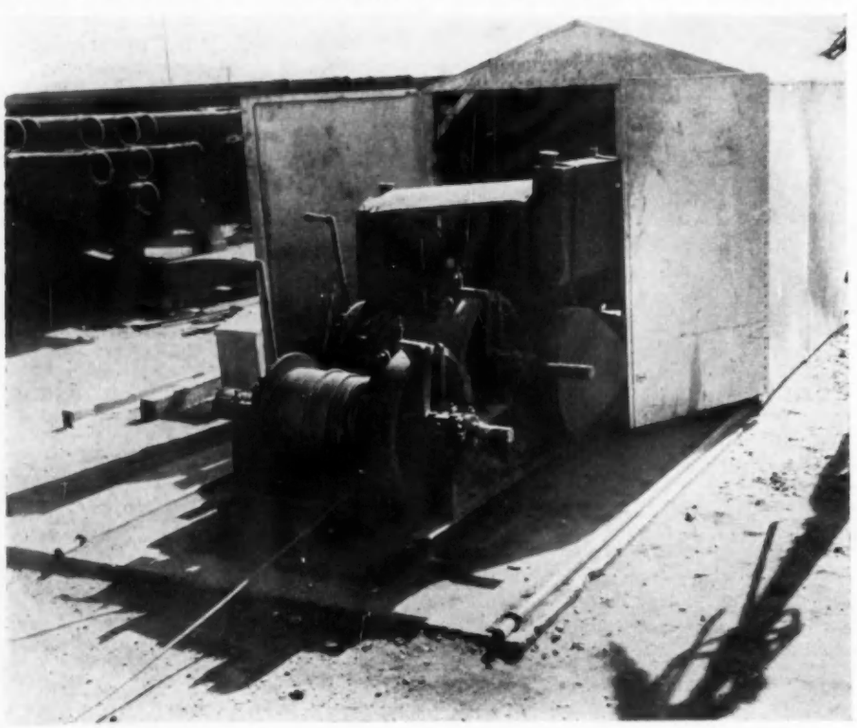
The unloading head consists of two small sheaves mounted one above the other and with their axes at right angles, in a steel framework. The supporting housing was made up of two 18-inch sections of 4-inch angle iron that were set up vertically and welded together with a steel plate on both the top and bottom, leaving sufficient space between the vertical sections to permit mounting of the lower sheave.

This unique unloading head permits unloading at any point along the railroad siding right-of-way, and on either the right or left side of the hoist. It can be removed and reinstalled in a base on the other side of the track, thus permitting uninterrupted movement of the railroad cars at that point, as the wire line passes under the rails.

A short section of 8-inch casing was welded to the base of the head, and a section of 10-inch casing was anchored in each of the concrete bases on either side of the railroad track. In operation, the head is set down into the larger casing, and pinned in place with a 1-inch steel rod that is slipped through similar holes drilled diametrically opposite each other in the upper part of each section of casing.

The head may be shifted from one side of the track to the other to correspond with the side on which the crane is working. A shallow tunnel beneath the tracks for the cable permits movement of other cars along the siding without disturbing the unloading work. If the crane is moved up the track to the left of the hoist, it is necessary only to transfer the upper sheave across to the opposite side of the steel framework, thus bringing the cable out of the head 180 degrees from the previous setting.

Contrary to the usual types of hoist installations, the house covering this unit is made to move back on pipe rails, thus leaving an unobstructed view for the operator. The front drum operates the crane, and the other is used for shifting railroad cars when necessary without disturbing hoist.



Warehousing Costs Lowered

Numerous advantages, from the standpoint of both safety and economics have resulted from the use of this unloading crane. Unlike a gin pole, this crane does not require that the pipe be swung up and carried over the heads of some of the ground men, with the resulting hazards accompanying such an operation. At no point does the unloading operation require any of the men to expose themselves to hazardous positions.

Unloading operations have been greatly speeded up. A carload of 180 joints of 5½-inch pipe now is unloaded in only 2 hours, as contrasted with the 5 hours that formerly was required with the use of a gin pole. It used to take approximately 2 hours to hook up the gin pole alone. Tallying now takes more time than actual unloading.

Another advantage of this type of unloading crane is in its portability. When there are no cars to be unloaded, the crane may be towed to some out-of-the-way corner, leaving more room for passage of trucks and other equipment in the center of the yard.

War to Curtail Oil Industry Profits

By L. J. LOGAN, Associate Editor

MOST of the factors that enter into the determination of oil-company earnings point toward narrowing henceforth of the possibilities for profit. And by the end of this year a serious shrinkage of current and potential earning power may be expected.

This conclusion is indicated by trends and developments that commenced in 1941, as well as by current and prospective events and conditions.

Even in the booming and prosperous, although ominous year of 1941, good earnings records were made only through benefit of improved prices and unprecedented business volumes, which made it possible to show above-average profit despite sharply higher taxes, increased costs of labor and materials, and special costs and losses entailed by the war.

In reflection of the magic of heavy sales volumes in cutting down per-barrel delivered costs of oils and operating expenses, there was an improvement of almost 50 percent in the aggregate net profit of 33 oil companies for 1941 as compared with 1940, with sales or gross income up 20 percent. The increased gross income reflected larger quantities of oils sold as well as better average prices realized.

The betterment in net profit from operations was limited, however, by ceilings imposed by the government on prices of both crude and refined oils, which circumscribed gross income. Furthermore, against the gross receipts were increased charges of practically all ordinary classifications, particularly taxes, costs of materials, labor costs, transportation tariffs, and operating expenses. In addition, it was found necessary or advisable by some companies to set aside out of 1941 earnings substantial sums to cover losses sustained because of the war or as reserves for contingencies or war losses, with the result that transfers to earned surplus were correspondingly held down, although larger than usual.

The experience of 1941 was but a prelude, however, to handicaps of 1942, which have become gradually more formidable and which will henceforth be even more serious.

Closing in upon the industry and ever narrowing the possibilities for profit are restrictive forces from all sides, although the industry as a whole had a good earnings record for the first quarter of this year, while results will be fair for some companies even in the second quarter.

Of major importance, henceforth, will be the war-induced curtailment of volumes of business and gross sales or income. For just as moderately higher volumes last year sharply boosted net income, so conversely, curtailment of volumes of sales this year will cut relatively deeply into profits, with some of the efficiencies and savings of heavy volume lost. Demand for motor fuel dropped below the year-ago curve for the first time in April, after having been previously well above it. But henceforth the comparison with 1941 will become less and less favorable, with the East and Northwest rationed and other districts reflecting the lack of new tires and new automobiles and trucks. Heating oil and other products also will be rationed in the East, while there is in progress in that area a large-scale substitution of coal and other fuels for fuel oil for industrial purposes. The Office of Petroleum Coordinator recently stated that voluntary conversion to coal and other fuels already had reduced the annual rate of heavy-fuel oil consumption by 10,000,000 barrels, and the agency estimated that additional conversions could effect a total reduction in consumption in the amount of 30,000,000 barrels annually, equivalent to 82,000 barrels per day.

As compared with consumption of about 1,600,000 barrels daily last year, the East Coast district currently is receiving only about 1,200,000 barrels of all oils per day, including 600,000 by railroad tank car, 200,000 by pipe line and barge, and 400,000 by tanker. It is indicated that tanker shipments to the region will be discontinued, to release all available ships for direct war service. But within three months, daily pipe-line movement probably will be increased 100,000 barrels and shipment by barges possibly may be expanded 100,000 barrels. Efforts to augment tank

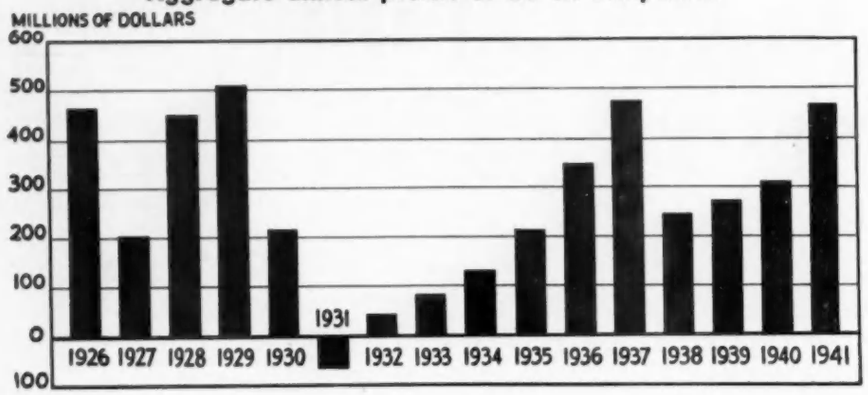
First Quarter Earnings of 21 Oil Companies Comparatively Good

(Net profits, after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.)

COMPANY	1937	1938	1939	1940	1941	1942	Percent Change 1941-1942
Atlantic Refining Co	$ 1,933,000	$ 2,048,000	$ 538,000	$ 3,122,916	$ 2,747,510	$ 1,237,035	— 54.9
Barnsdall Oil Co	591,155	923,797	565,417	357,737	486,569	775,248	+ 59.3
Cities Service Co	3,315,317	3,187,493	2,953,441	5,698,089	3,231,603	3,888,253	+ 29.2
Continental Oil Co	3,691,193	1,805,197	721,423	1,380,434	1,215,582	3,544,165	+ 191.5
Derby Oil & Refining Corp.	‡140,584	*55,049	*41,092	*15,215	11,921	†25,000	+ 109.7
Houston Oil Co	469,366	483,483	403,442	478,503	423,280	512,689	+ 21.1
Lone Star Gas	3,197,470	2,284,384	2,987,600	4,565,658	4,389,136	4,696,478	+ 7.0
Margay Oil Corp	93,126	102,603	56,500	55,898	30,644	†100,000	+ 226.3
Panhandle P. & R. Co.	36,343	8,854	*11,600	13,032	‡21,897	35,046	+ 60.0
Phillips Petroleum Co	5,615,634	2,314,642	1,485,533	3,286,620	3,307,892	3,364,551	+ 1.7
Plymouth Oil Co	640,319	702,892	619,762	586,441	245,806	464,276	+ 88.8
Quaker State	387,737	101,472	277,206	291,116	218,055	429,093	+ 96.7
Seaboard Oil Co	591,365	456,729	401,051	502,949	264,358	†265,000	+ 0.2
Shell Union	3,679,479	2,907,447	478,266	5,314,158	3,621,794	4,656,546	+ 28.5
Skelly Oil Co	1,534,413	664,770	239,080	773,281	898,917	1,300,036	+ 44.6
Standard of California	7,889,489	7,130,486	3,266,017	4,534,623	4,799,184	5,456,952	+ 13.7
Superior Oil Corp	42,167	112,673	16,146	42,159	49,588	*21,540	.....
The Texas Co	10,800,000	6,100,000	1,250,000	12,800,000	6,600,000	7,900,000	+ 19.6
Texas Pacific C. & O. Co	220,500	240,218	206,359	179,691	195,597	266,552	+ 36.2
Tide Water Associated	2,479,662	3,250,264	1,234,182	3,780,220	2,859,950	3,199,038	+ 11.8
Union of California	2,200,000	2,300,000	1,054,635	766,148	1,273,006	728,380	— 42.7
Total 21 Companies	$49,548,319	$37,070,355	$18,901,368	$48,514,458	$36,892,289	$42,822,798	+ 16.1

* Loss. † Estimated. ‡ Before Federal Taxes.

Aggregate annual profits of 28 oil companies



car shipments can result in an increase of 100,000 to 150,000 barrels daily at best. Unless new pipe lines or new barging facilities are built, therefore, it appears that shipments of all oils into the East Coast district will settle down to around 1,000,000 barrels daily.

The probable effect of the lack of new tires and new cars cannot be definitely anticipated, but there can be only a downward trend in consumption of petroleum products as a consequence; and the trend already is quite evident, while it is expected to be especially pronounced from late spring to early fall, because of curtailed vacation travel.

These limitations on civilian consumption will far outweigh any prospective increases in demand for petroleum products for military, war production, and export purposes. While it is evident that the war uses henceforth will expand greatly, it is significant that the immediately prospecive demand for crude oil production in the United States is down 16 percent from the requirements in December. The petroleum coordinator recommended production of 3,474,500 barrels daily of crude oil and other petroleum liquids in May, or 664,000 barrels a day less than the actual output of 4,138,500 barrels daily of crude oil alone that was produced in December, 1941, when an all-time record was established. In reflection of the reduced demand for oils, refinery runs are down about in line with crude-oil production, and some plants in the Southwest have closed down indefinitely, while others there and also in other districts have reduced runs to stills.

Gross operating income of the oil industry henceforth will be down about in line with the decrease in volume of oil sold, as prices remain generally under ceilings that prevailed in the latter part of 1941. Even in the East Coast district, where transportation costs have greatly increased, only relatively small increases in prices have been permitted.

To some extent, costs and expenses will be reduced in 1942, in consequence of the handling of less oil and drilling of fewer wells. At the same time, however, various factors will tend to increase costs and expenses, including somewhat larger expenses of repairs and maintenance, with more replacement equipment used and slightly higher prices paid for parts. Labor costs will be relatively heavier per barrel of oil sold, not only because of curtailed volume but also because of higher wage rates and the loss of efficiency of labor as dislocations and readjustments arise when men go into military service or change jobs under war-induced shortages of man power.

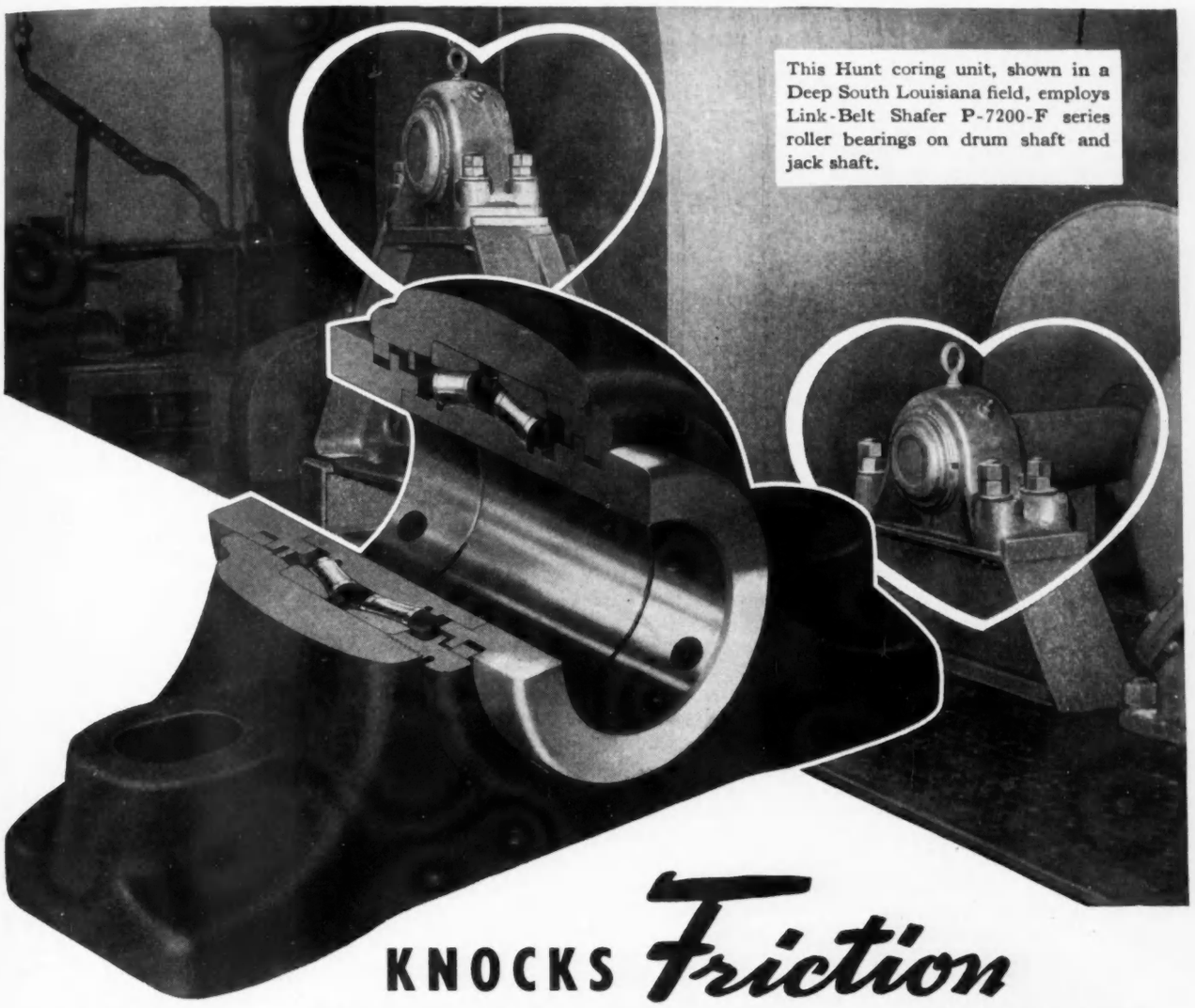
While savings will be made in current expense of drilling wells, with a resultant bolstering effect on net income, any companies that fairly well maintain production at former rates will be exhausting existing wells without normal compensatory development of new wells, with the result that potential producing ability will diminish and the need for new drilling will accumulate.

Of major importance to companies that market extensively in the East Coast district and on the West Coast are the greatly increased costs of transporting oils following substitution of railway, pipe-line, and barge movements for normal and much cheaper tanker shipments. Inroads of higher transportation costs into profits were partially compensated by lifting of ceilings on gasoline and light fuel oil prices in the East by about ¾ cent a gallon prior to the end of March, 1942. But sharp increases in tanker charges effective April 1 and increased movements by rail and pipe line have put oil companies into the distressed position of sustaining serious losses on all the oils moved into the East. Appeals for relief have been made to the Office of Price Administration, but the relief given so far has been limited to new lifting of ceilings, effective April 30, as follows: gasoline 4/10 cent a gallon; Nos. 2, 3, and 4 fuel oils, gas oil, tractor fuel, and distillate diesel fuel oil, 2/10 cent per gallon; and No. 5 and No. 6 residual fuel oils, bunker C, navy grade, and residual diesel fuel oil, 25 cents a barrel.

These newly authorized price increases approximately compensate for added costs involved in stepping up tank-car shipments into the East Coast district. But they do not compensate for losses sustained on shipments into the region by tanker at present sharply increased costs, and furthermore, they do not compensate for substantially higher costs involved in the necessity of adding lighter fuel oil in with residual fuel oil to provide a larger volume of the latter. Prior to the raising of price ceilings effective April 30, a committee of oil men from District 1 (East Coast) had applied to OPA for an increase of $1 a barrel in prices of bunker C and No. 6 fuel oil, to cover cost increases equivalent to 35 cents a barrel involved in increased rail shipments, 45 cents a barrel in higher war-risk insurance, and 20 cents for better quality of oil, with the average gravity raised from 8 to 14 degrees.

While the requested price increases were not allowed by OPA in its April 30 revisions, it has been indicated that the government is studying plans to make full compensation for increased transportation costs by subsidies extended through the Reconstruction Finance Corporation, through which procedure inflationary results would be avoided. Under the plans, the government would buy all oils shipped into the district at actual laid-down costs, including freight, and that it would then resell to oil companies and suppliers at current prices, which are lower than the laid-down costs. The government would absorb the added transportation costs instead of allowing it to be passed on to the consumers, thereby avoiding inflation.

Until this contemplated relief or some other is provided, the oil industry will continue to suffer financially, sustaining material losses on



This Hunt coring unit, shown in a Deep South Louisiana field, employs Link-Belt Shafer P-7200-F series roller bearings on drum shaft and jack shaft.

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Consolidated Statement of Income and Profit and Loss for 33 Oil Companies in 1939, 1940 and 1941

	TOTAL 33 COMPANIES			Percent Change 1940-1941
	1939	1940	1941	
Gross Operating Income (Net sales and miscellaneous)	$2,996,666,482	$2,984,777,333	$3,573,204,667	+ 19.7
Operating Charges (Costs of products sold; selling, operating, geophysical, geological, general, and administrative expenses; lease rentals; and taxes except federal income)	2,339,328,380	2,246,086,270	2,606,934,275	+ 16.0
Operating Income Before Provision for Capital Extinguishments	657,338,102	738,691,063	966,270,392	+ 30.8
Provision for Capital Extinguishments (Reserves and Retirements, Including Depreciation of Physical Assets or Properties, Depletion and Amortization of Oil Lands and Leases, Dry Hole Losses, Surrendered Leases and Abandoned Wells, Intangible Development Costs, and Other Charges)	390,772,220	412,029,522	416,405,692	+ 1.1
Net Operating Income	266,565,882	326,661,541	549,864,700	+ 68.3
Non-Operating Income	50,688,482	61,086,581	56,445,583	— 7.5
Total Income Before Charges	317,254,364	387,748,122	606,310,283	+ 56.3
Interest on Debt, Loan Expense, etc	23,418,505	24,792,136	28,084,133	+ 13.2
Net Income Before Federal Income Taxes	293,835,859	362,955,986	578,226,150	+ 59.3
Provision for Federal Income Taxes	60,777,532	91,090,353	177,005,229	+ 94.3
Net Income Including Minority Interests	233,058,327	271,865,633	401,220,921	+ 47.5
Income Applicable to Minority Interests in Earnings	3,822,353	3,701,813	3,137,625	— 15.2
Net Profit of Company Before Adjustments	229,235,974	268,163,820	398,083,296	+ 48.4
Adjustments or Provisions for Contingencies	3,071,491	21,324,119	27,049,944	+ 26.8
Net Profit After Adjustments	226,164,483	246,839,701	371,033,352	+ 50.3
Dividends Paid Out	142,698,866	152,384,939	179,270,343	+ 17.6
Surplus for Year	83,465,617	94,454,762	191,763,009	+ 103.0

any oils that may be shipped to the East by tanker. Even following the raising of the price ceiling by 25 cents on April 30, residual fuel oil is selling in New York at $1.80 a barrel. Yet the cost when delivered there by tanker is about $2.35 a barrel, exclusive of handling and storage charges. That oil is quoted on the Gulf Coast at 85 cents a barrel, and the basic tanker rate is 48 cents a barrel, to which is added an authorized surcharge of 96 cents, to cover heavy war-risk insurance on the tanker, while about 6 cents a barrel more is required as war-risk insurance on the cargo. While these shipping costs are very high, somewhat greater charges are involved on any oils moved all the way to the New York area from the Gulf Coast by rail, although any aid of pipe lines in the overland movement helps to hold down costs of such shipments.

Even in 1941 there were numerous instances in which oil companies reported losses sustained directly through the war or set aside reserves for contingencies or war losses. And in 1942, such special reserves and extraordinary adjustments, necessitated by the war, will be an increased burden on income, particularly for companies operating on a world scale.

For 33 oil companies, combined adjustments to take care of wartime contingencies and for normal purposes involved a 27-percent larger charge against income in 1941 than in 1940. Those companies, in the aggregate, charged against income as adjustments or provisions for contingencies roundly $3,000,000 in 1939, $21,000,000 in 1940, and $27,000,000 in 1941.

The setting up of reserves for contingencies brought about by the war represents conservative accounting that will help to keep companies in sound financial condition. But as long as it is necessary to provide these reserves, correspondingly less will be available as profit and for paying dividends.

Thirty-three oil companies paid out in interest charges and expenses in connection with debt 13 percent more in 1941 than in 1940, after having made important savings previously through refinancing at lower interest. The recent upward trend of interest costs may be expected to continue, furthermore, in 1942, as oil companies are borrowing additional funds for financing plants needed to make critically needed aviation gasoline, toluol, butadiene, and other war products.

Ranking high in importance among the added burdens on income in 1942 will be sharp increases of federal income taxes. Anti-inflation plans call for holding all corporate profits down during the war to comparatively low levels, and it is generally assumed that taxes will be at least 50 percent higher in 1942 than in 1941.

For 33 oil companies, federal income taxes were twice as great in 1941 as in 1940, and the 1941 taxes took one third of the aggregate net income shown after adjustments but before the taxes, leaving two thirds for paying dividends or building up surplus. If the federal income taxes had been 50 percent higher, as indicated for this year, they would have absorbed one half of the net income shown before provision for the taxes, leaving one half for dividends and surplus.

The percentage of profit absorbed by the federal income tax has increased steadily in recent years. As compared with the 32 percent for 1941, it was 27 percent in 1940 and 21 percent in 1939, as indicated by accompanying figures based on experience of 33 oil companies.

Year	Net Income Before Federal Income Taxes (Millions of Dollars)	Federal Income Taxes (Millions of Dollars)	Percent of Net Income Absorbed by Federal Income Taxes	Net Profit After Federal Income Taxes (Millions of Dollars)
1939	287	61	21	226
1940	337	91	27	246
1941	548	177	32	371

Those figures reveal that the oil companies paid one third more in federal income taxes in 1940 than in 1939, while net profit after the taxes increased only 9 percent. Similarly, the companies paid practically twice as much in federal income taxes in 1941 as in 1940, while profit after the taxes increased 50 percent.

Reports available revealed that 21 oil companies in the first quarter of 1942 had an aggregate net profit of $42,822,798 after all deductions and provision for federal income taxes. That was 16.1 percent more than their profit in the initial quarter of 1941. Of the 21 companies, 18 showed increases, but 2 registered decreases, while 1 reported a loss, in contrast with profit in last year's first quarter.

It should be noted, however, that the first quarter of last year was not exceptionally profitable, as prices of gasoline and other petroleum products as well as crude oil had not yet registered the improvement that shortly afterward occurred. This year's first quarter, although better than 1941, was less profitable than the initial quarters of 1940 and 1937.

First-quarter results for these 21 companies each year from 1937 through 1942 appear in an accompanying table.

Because of the relatively poor showing of the oil industry in last year's first three months, with prices low, the above indicated 16-percent gain for this year's first quarter was better than average for all corporations. The National City Bank recently made a tabulation which showed that 280 companies had a combined net income in the first quarter of this year amounting to $243,000,000, after taxes, which was 25 percent less than those companies earned in the first quarter of 1941 and 26 percent less than in the fourth quarter of 1941.

Production and Disposal of

Salt Water

In the East Texas Oil Field

By BRYAN W. PAYNE, President
East Texas Salt Water Disposal Company
and Iowa Payne Oil Company, Tyler, Texas

Before East Texas Chapter of the American Petroleum Institute, Kilgore, Texas, May 12, 1942

IT IS now well known that East Texas is a water drive field. It was inevitable therefore that in East Texas, as in other fields of this type, large volumes of salt water would be produced along with the oil long before final depletion of the reservoir. Until recently it had been less well appreciated, except by engineers and technologists, that since salt water under pressure constitutes the driving force that moves the oil from the sand to the well bore, it is of paramount importance that the water pressure in the reservoir be conserved and utilized in such a way as to yield the greatest ultimate recovery of oil.

Cross Section of Field

A generalized west-east cross section of the East Texas field illustrating how the Woodbine sand pinches out to the east against the Austin Chalk with the oil trapped from below by the presence of salt water is shown in Figure 1. The original bottom hole pressure in the field was 1620 pounds per square inch which is approximately equivalent to the difference in hydrostatic head of water between the surface elevation of the Woodbine sand outcrop and the estimated level at 3320 feet below sea level in the East Texas reservoir. The cross section shows how the water, under pressure, forces the oil from the sand in the reservoir into wells penetrating the formation. The cross section also shows that slightly over one half of the East Texas field was originally underlain by water.

Water Production History

Early in the life of the East Texas field, engineers, geologists and production men estimated the original water level in the field at 3320 feet below sea level. Many wells were drilled into water on the west side of the field where the oil sand section was thin. Small amounts of water were produced from the time of the early wells on the west side: in the latter part of 1933, water production reached 9000 barrels per day. During 1934, the water production from the field remained at approximately 10,000 barrels per day from about 600 wells. During 1935, the volume of water increased to about 18,000 barrels per day and the number of water wells jumped to about 1000. By the end of 1936, approximately 2000 wells were producing water in a total amount

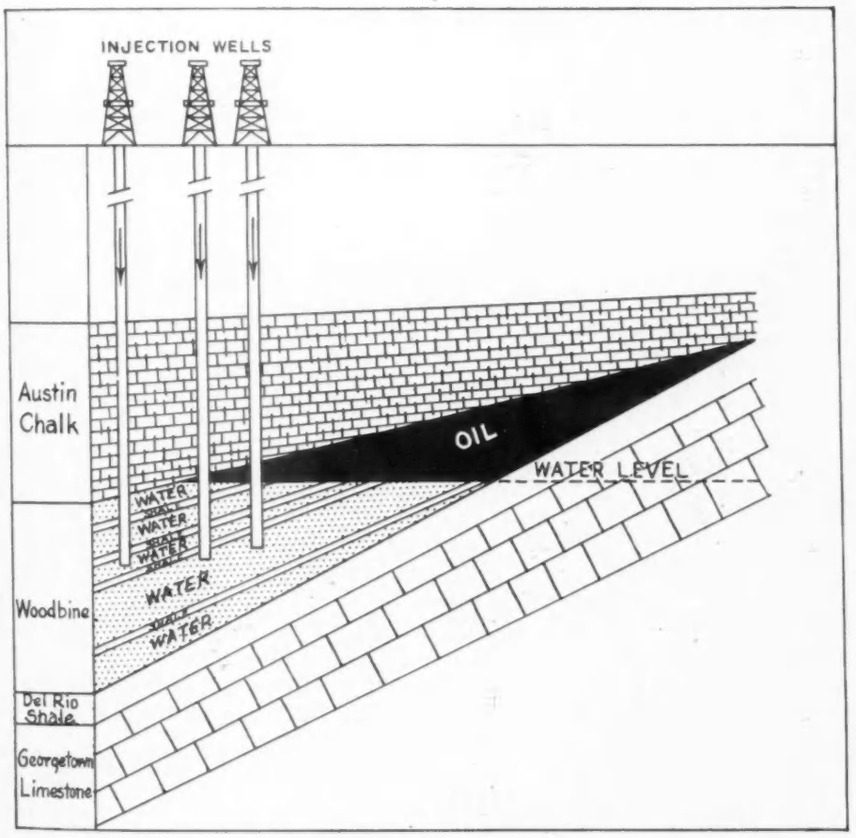


FIGURE 1

Generalized cross-section of the East Texas oil field showing how salt water returned to the sand helps to maintain the bottom hole pressure in the reservoir.

—Taken from The Oil Weekly, April 29, 1940.

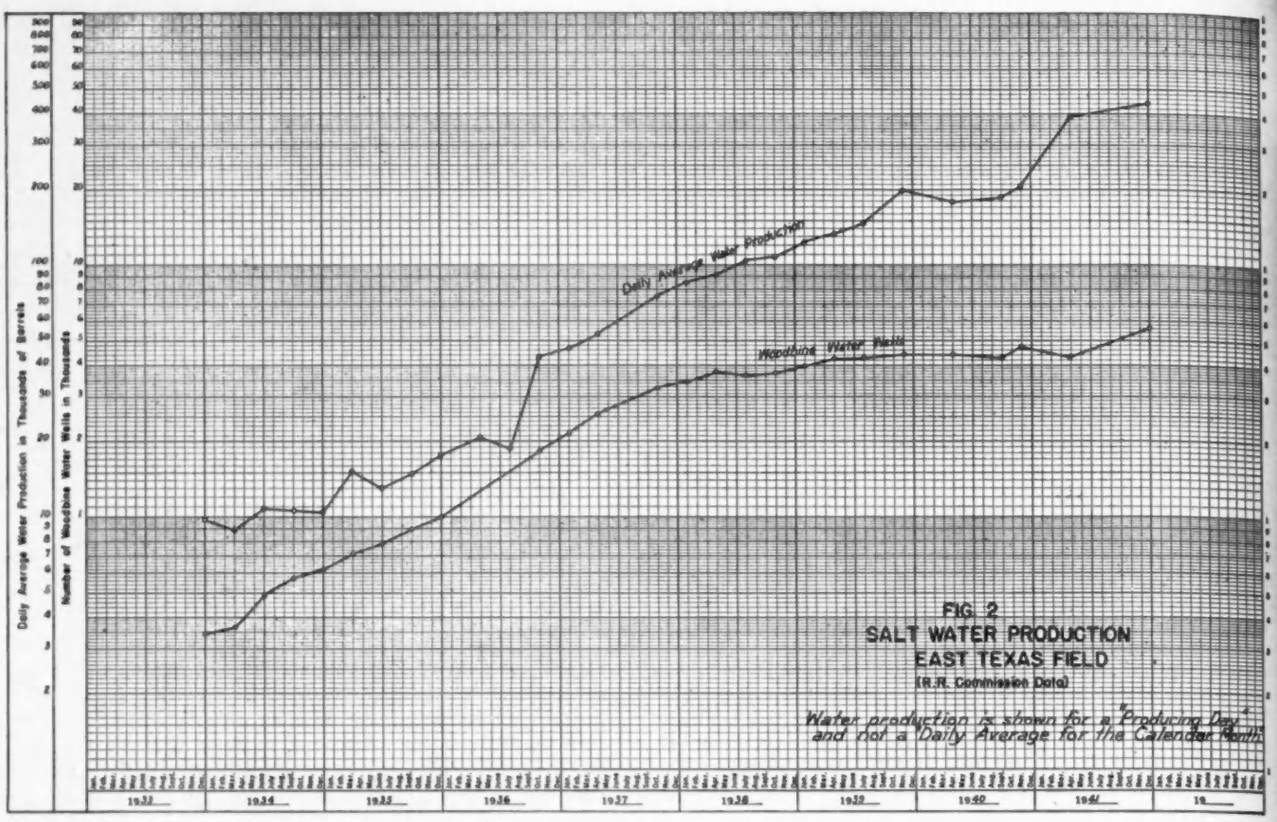


FIG. 2
SALT WATER PRODUCTION
EAST TEXAS FIELD
(R.R. Commission Data)

Water production is shown for a "Producing Day" and not a Daily Average for the Calendar Month.

of 43,000 barrels per day. Since that time, the production of salt water from the East Texas field has increased at an alarming rate, as shown in Figure 2. (Data from Railroad Commission Records.) The December 15, 1941, report of the Railroad Commission showed 5659 water wells producing a total of 439,106 barrels of water per day.

As oil was removed from the reservoir, water

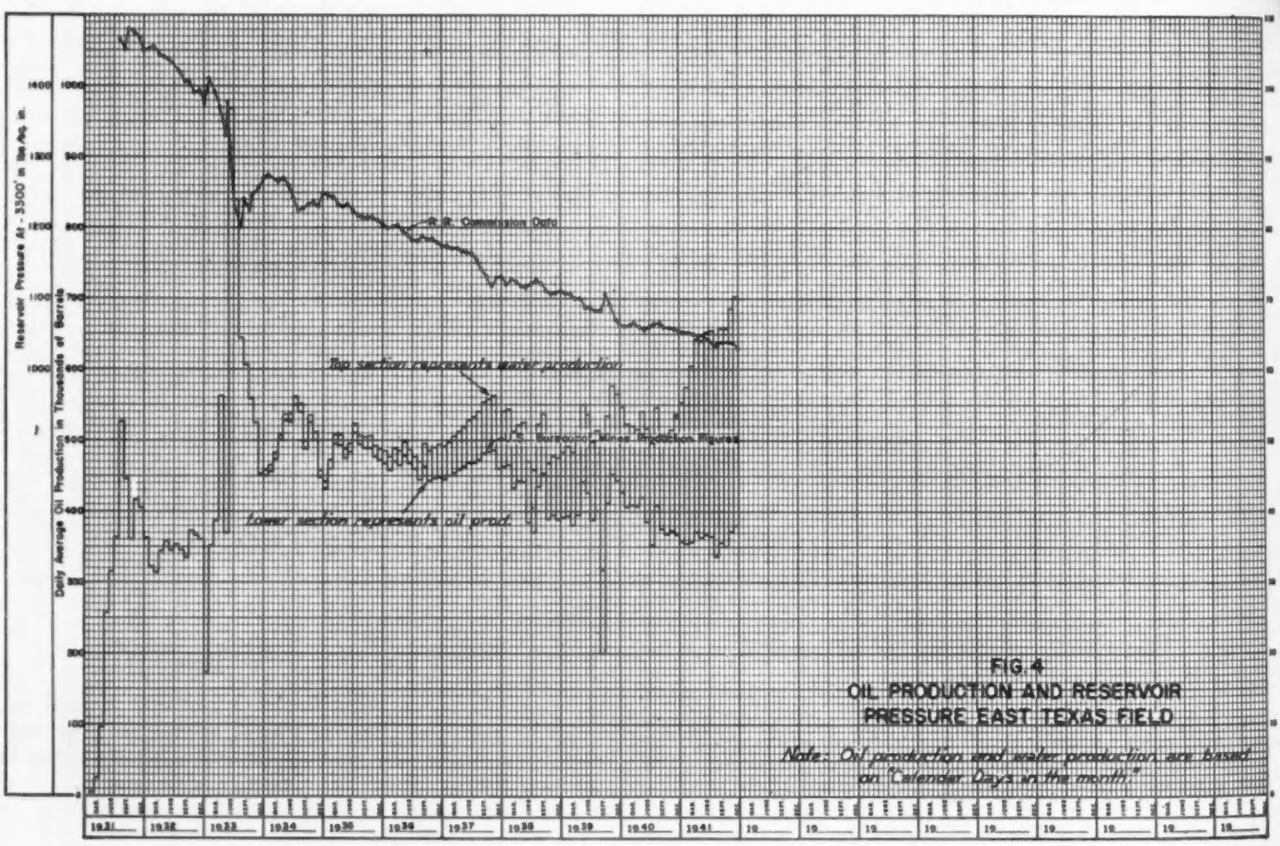
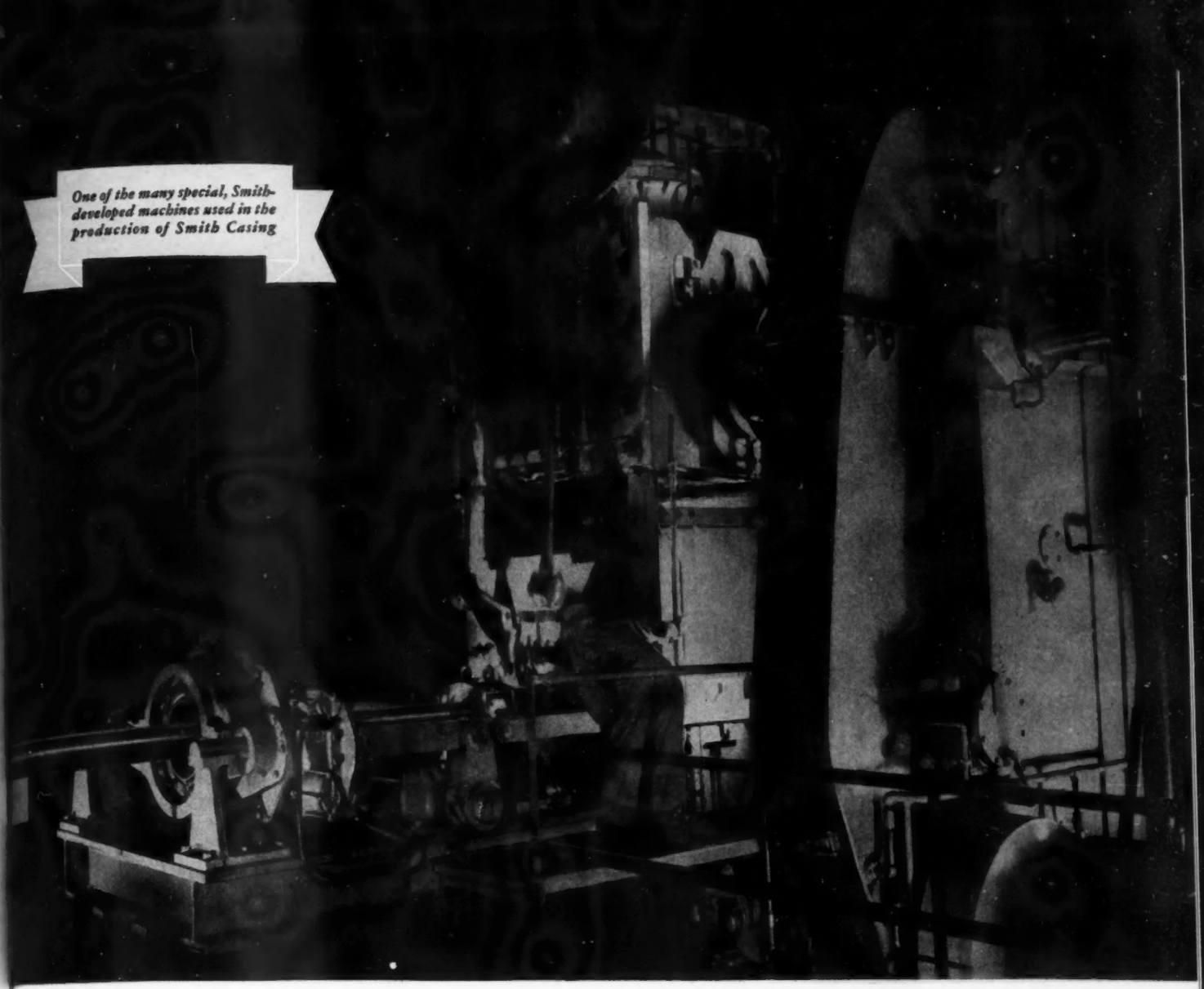


FIG. 4
OIL PRODUCTION AND RESERVOIR
PRESSURE EAST TEXAS FIELD

Note: Oil production and water production are based on "Calendar Days" in the month."



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moved in to take its place. Consequently, the wells on the extreme west side of the field were the first ones to be "washed out." As additional oil was removed from the sand, the water advanced. The map in Figure 3 shows the extent to which salt water has encroached into the field up to December 15, 1941. It will be observed that the encroachment has been quite general insofar as the entire west edge of the field is concerned, but with respect to any particular area, the encroachment in many places has been very irregular. The depth to which the wells are drilled and the rate of withdrawal—influenced tremendously by the close spacing of wells in many sections, have contributed substantially to the irregularity of the water encroachment.

Pressure-Production Relationship

The results of work done in the East Texas field by the Bureau of Mines[1] in the analysis of bottom hole samples, early in the life of the pool, showed the oil in the reservoir to be undersaturated with gas and explained to a large degree, the fact that the pressure in the East Texas oil reservoir was sustained by hydrostatic pressure.

By 1934, the operation of the water drive was so well understood by technologists studying the problem[2,3] that they were able to derive a mathematical relationship between the rate of fluid production and the pressure. With this relationship it has been possible to calculate the rate of pressure decline at any given rate of withdrawal.[4] Figure 4 shows graphically the rate of oil production from the field as reported by the Bureau of Mines plus the water production recorded by the Railroad Commission, compared with the bottom hole pressures. It may be observed from this chart that when the rate of withdrawal has been high, the decline in reservoir pressure has been rapid. Conversely, the reservoir pressure has increased or declined less rapidly when the rate of withdrawal has been reduced. It is also apparent from the chart that when the rate of withdrawal from the field has been kept at a more or less uniform rate, the rate of decline in bottom hole pressure has been small and also uniform.

Of particular significance is that the pressure is related to the total fluid withdrawal and not to the withdrawal of oil alone. Thus, the production of a barrel of water will cause about the same drop in bottom hole pressure as the production of a barrel of oil. Stated differently, the produced water must be replaced by an equivalent amount of water influx, which requires a greater pressure drop between the field and the water sand to the west. If this additional water influx were not possible, then the water drive would cease and only that oil would be produced which the limited amount of gas in solution could eject from the sand at low pressure. These considerations also show that the water drive is not inexhaustible; in fact, there is a definite rate at which water can enter the reservoir. Should the rate of water production ever be maintained at a level exceeding this rate, the water drive would be dissipated and much oil would remain unrecovered.

Efforts to Plug Off Water

As the number of wells producing salt water in the field increased, the total amount of water produced likewise increased. Since it had been clearly demonstrated that the withdrawal of fluids from the

[1] References at end of paper.

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reservoir directly affected the bottom hole pressure, it was apparent to most East Texas oil men, that some steps had to be taken to reduce the volume of water produced from the reservoir, if the bottom hole pressure was to be sustained and the flowing life of the field prolonged. Many attempts were made to reduce the volume of water produced by plugging off water,[5] but when the sand section was thin or there were no shale breaks in the sand body, it was found that after a well started producing a large volume of water the chances of shutting the water off and still maintain oil production was slight.[6] Many operators consider it good practice to plug back their wells when small amounts of water are produced as insurance against the day when the well will surely produce large volumes of water and make repair work virtually impossible. Undoubtedly, much benefit has been done through the timely plugging back of water wells. Notwithstanding efforts to plug off bottom hole water, the production history of the field shows that the volume of water produced has increased rapidly.

Early Disposal of Salt Water

Since efforts to materially reduce water production by plugging back have failed as a practical method, it is evident that some other method of controlling the water problem had to be found. If the salt water were produced, it had to be disposed of.

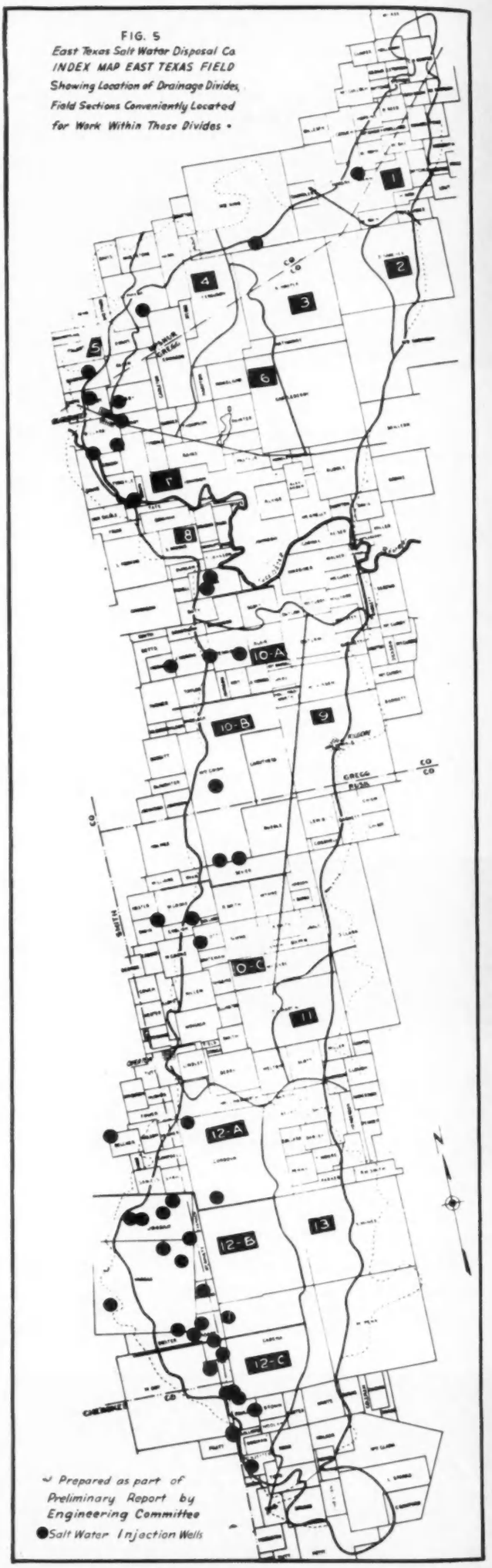
Some definite, practical and economical method for the disposal of salt water had to be found. It was first thought that the water could be evaporated in open pits in the field, but the idea was soon discarded when it was learned that the rate of evaporation in East Texas was practically equivalent to the rate of rainfall. Various methods of disposing of salt water were considered, including:

1. Evaporation in open pits.
2. Evaporation by aid of artificial heat.
3. Continuous discharge of salt water into streams.
4. Storage of salt water and controlled discharge during periods of heavy rainfall.
5. Transportation of salt water to the Gulf by pipe line.
6. Injection of salt water to subsurface formations.

Each of the above possibilities was explored. Early in 1936, the feasibility of returning salt water to the Woodbine sand was demonstrated in a test well about two and one half miles west of the field in the south end. At that time, less than 50,000 barrels of salt water per day were being produced, but it was realized that the problem was one of increasing importance. Through experimentation, the return of salt water to the Woodbine sand was determined to be the most practical.

Effect of Water Injection on Pressure and Oil Recovery

Not only has the return of salt water to the Woodbine sand been demonstrated to be the most practical method of disposal, but it also contributes materially to the maintenance of the reservoir pressure. This pressure maintenance arises from the fact that when a barrel of produced water is returned to the sand, it offsets the withdrawal of a barrel of water and cancels its effect on the pressure decline. Thus, if all the produced water were injected, the effect would be about the same as if there had been no water production. It has been estimated that the reservoir pressure would now be in the neighborhood of 1200 lbs./sq. in. instead of 1000 lbs./sq. in. if there



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Tabulation 1

Salt Water Injection Wells — Month of March, 1942
East Texas Field

Operator	Lease	Well No.	Wells Connected	Injection Pressure	Barrels of Water Injected		Injection Started
					For Month	Accumulative	
Gulf	A. Douglas	1	51	29" Hg.	38,819	661,281	8-12-40
Gulf	H. Florey Fee	1	42	29.2" Hg.	28,688	446,414	12- 5-40
Gulf	J. W. Trimble	1	167	26.0" Hg.	79,170	1,242,625	3- 2-40
Humble	L. D. Crim	49-S	13	0-400 #	3,782	23,481	7-25-41
Humble	D. Johnston A	1-S	7	30 #	39,678	767,750	7-28-39
Humble	M. C. Thompson	1-S	13	Gravity	4,900	89,019	7-11-39
Humble	A. L. Walker	12	11	Gr. to 500 #	2,495	31,571	12-10-40
Magnolia	L. J. Everett	35	22	Gravity	31,717	110,695	12-21-41
Magnolia	M. E. Peterson	6	60	Gravity	74,766	442,179	7-22-41
Magnolia	John Radford	45	68	Gravity	94,321	1,355,817	10-12-40
Magnolia	J. R. Wright	43	37	Gravity	19,013	490,863	2-13-40
Ohio	M. M. Cross	9	44	75 #	93,044	2,560,648	11- 2-39
Ohio	M. M. Cross	12		0-103 #	104,024	2,367,273	4-13-40
Ohio	J. Sadler	1	37	0-60 #	21,551	2,330,500	4-20-40
Ohio	J. Sadler	2		0-60 #	222,391	1,059,593	8-28-41
Ohio	J. H. Sharp	4	27	10" Hg.	232,260	1,398,522	8-15-41
Ohio	M. L. Thompson	9	12	28" Hg.	45,076	478,337	10-24-40
Richardson	Mayfield	2	31	5 #	135,145	1,242,588	2-17-41
Selby	Snavely Hrs. "D"	13	11	Gravity	24,617	320,616	2-16-41
Shell	J. S. King	9	38	28 Hg.	38,210	295,960	4-29-41
Sinclair	A. S. Jarvis "A"	9	65	0-200 #	70,551	980,930	7-13-40
Sinclair	Mayfield "A"	49	47	20" Hg.	91,981	1,766,989	1-16-40
Sinclair	Mayfield "B"	21	65	0-400 #	31,535	466,994	7-13-40
Sinclair	H. J. Thomas	5	4	0-200 #	46,043	305,328	11-19-40
Sinclair	Peter Tipps	14	5	0-80 #	50,649	1,203,205	5- 6-40
Sinclair	Amanda Wiley	9	19	28" Vac.	90,913	1,949,506	9-21-39
Sinclair	Bunch Wilson	9	44	28" Vac.	104,821	3,870,348	7- 7-39
Sinclair	R. G. Wright	19	57	0-28"	94,641	1,394,820	8-10-40
Stanolind	C. O. Christian	6	17	26" Vac.	16,566	366,899	12- 6-40
Stanolind	R. A. Moores	3	11	20" Hg.	32,159	1,066,195	5-29-39
Stanolind	J. M. Newman	3	32	20" Hg.	33,683	510,883	7-28-40
Sun	J. A. Layne	1	70	Gr-125 #	110,217	2,858,054	10-13-39
Sun	H. A. Pace "B"	38	58	28" Vac.	109,782	3,671,737	6- 1-38
Sun	T. C. Pamey	1	28	28" Vac.	86,086	1,530,377	10-26-40
Texas	Mae Blackwell	20	23	28" Vac.	4,101	80,088	1-12-41
Texas	W. T. Chappell	11	10	Vac. 28 Hg.		440	12-15-41
Texas	A. G. Dearing	9	10	28" Vac.	6,650	43,115	10-10-41
Texas	A. S. Jarvis "A"	16	28	28" Vac.	11,050	174,210	10-23-40
Texas	A. W. Kersh	5				1,301,155	8-10-39
Texas	H. L. Phillips	5	9	28" Vac.	43,400	659,970	1- 3-41
Texas	L. Radford	1	6	28" Vac.	15,400	146,395	12-16-40
Texas	S. D. Walker	12	22	28" Hg.	2,750	99,884	4- 8-41
Texas	J. W. Wilson	10	15	28" Vac.	25,270	722,149	3- 4-40
Texas	E. M. Woods	12	15	28" Vac.	4,010	134,584	11-13-40
Tide Water	Tom Bell	18	11	27" Vac.	35,282	1,240,282	3- 1-39
Tide Water	W. R. Nicholson	16	15	27" Vac.	8,637	47,105	9-27-41
Vaughn	W. O. Alford	14	13	0-1500 #	4,505	29,815	7- 6-41
	Total (Active)	45	1,390		2,464,349	44,337,189	
	Daily Average				79,495		

had been no water production or if all of the produced water had been returned to the Woodbine sand.

It is now widely accepted by engineers and technologists that water drive is the most efficient mechanism for the production of oil, whereas production by gas drive resulting from release of gas from solution at low pressure is the most inefficient mechanism.[7] The relative differences in recoveries between these two possible methods of production may vary in excess of 100 percent. It therefore becomes apparent that in order to obtain the maximum possible amount of oil from the East Texas field it is extremely important that the operation of the water drive be maintained until the field is exhausted. Since efforts to reduce water production have not been entirely successful, it follows that the injection of salt water on a large scale is the only available remedy and that the continuation of the water drive is dependent upon the successful accomplishment of this objective. Of even more importance during the present emergency than the ultimate oil production is the rate of production which might be maintained from the East Texas field in the event that it should become necessary to produce at higher rates than are currently permitted. Since the production of water has about the same effect as the production of oil, the rate of production of oil from the field could be substantially doubled without material additional loss of reservoir pressure if it were possible completely to eliminate the dissipation of the reservoir water. Considered in a different light, the rate of water production has reached such a scale that unless it is injected the reservoir pressure will continue to decline even at highly restricted rates of oil production. Continued reservoir pressure decline may require the installation of additional pumping facilities, and in view of the present shortage of equipment, it is exceedingly important that such a condition be prevented if possible.

Disposal of Water by Return to the Sand

The first salt water injection well to take care of water produced in the field was Sun Oil Company's H. A. Page "B" 38 in the Vargas survey, Smith County. This well was an abandoned Woodbine test well drilled in January, 1938, which did not produce oil. The well was reconditioned by drilling deeper and cementing a liner below a shale break. Injection into this well started during June, 1938, and up to this time has injected over 3½ million barrels of salt water. The details of this and other disposal wells drilled in the field are probably familiar to you from personal knowledge in the field and through articles that have appeared in the trade journals.[8,9]

The success of the first salt water injection well convinced operators that the return of salt water to the Woodbine sand was not only a practical method of disposing of salt water, but also offered considerable possibilities for the maintenance of pressure.[10,11]

Growth in Use of Injection Wells

The second injection well was put into operation during March, 1939, by Tide Water Associated Oil Company, who drilled a special disposal well on its Tom Bell lease. By June of the same year, Stanolind Oil & Gas Company had reconditioned its Moores 3 well and converted it from an abandoned oil well to a salt water injection well. During July, 1939, three additional salt water injection wells were completed and by the end of the year, ten injection wells were in operation. During 1939, a total of 2,250,761 barrels of water were injected. By the end of 1940, there were 32 injection wells in operation and during that year a total of 10,965,939 barrels of salt water were injected for an average of 29,962 barrels per day. During 1941, there were a total of 47 injection wells operated by both large and small companies in opera-

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tion and 23,530,319 barrels of salt water were injected for an average for the year of 64,467 barrels per day.

A total of 47 injection wells have been completed in the East Texas field and have returned over 44 million barrels of water to the sand up to this time. The location of the injection wells in the field is shown in Figures 3 and 5. During the month of March, 1942, approximately 80,000 barrels of salt water per day were injected. The injection wells, the volume of salt water injected during March, 1942, the well head pressure, the date injection started and the cumulative water injection are shown in Tabulation 1.

The daily average salt water injection in the East Texas field by months from January, 1939, to April, 1942, is shown in Figure 6. The chart also shows the number of injection wells in operation and the cumulative water injected over the same period of time.

Notwithstanding the interest shown in returning salt water to the sand and the value of the water in maintaining the bottom hole pressure, the production of water in the field increased more rapidly than the injection facilities. Nevertheless, the percentage of the total water produced that was returned to the sand increased from 1.63 percent in January, 1939, to 11.12 percent by the end of the year; by the end of 1940, the percentage had increased to 27.96 percent. However, during 1941, the injection facilities were less adequate to take care of the increased volume of salt water so that by the end of 1941, only 21.37 percent of the salt water produced was returned to the sand. The daily average salt water production compared to the amount returned to the sand is shown in Figure 7, together with the percentages.

Field Wide Disposal of Salt Water

During the summer of 1941, many operators in the East Texas field viewed with increasing alarm the rapid increase in the volume of water produced and the resultant decline in reservoir pressure. The seriousness of the situation was called to the attention of many company executives by their engineers, which resulted in attention being focused on the problem.

Large companies in the East Texas field with extensive holdings in the water producing part of the field were able to drill injection wells and dispose of their salt water. Smaller operators with less extensive holdings were not able to drill injection wells and install expensive treating facilities because the volume of water produced by them did not justify the expense. Joe Zeppa of Delta Drilling Company proposed to the Railroad Commission in a hearing on July 29, 1941, that he be permitted to drill an injection well west of the productive limits of the field and connect on to different companies' water producing wells to dispose of the salt water produced. He further proposed that a well which returned all of its water to the sand be given an additional allowable of one barrel of oil per day. Zeppa was supported in these efforts by many other smaller operators, including Judge C. R. Starnes, J. H. Edwards and Bryan W. Payne.

Railroad Commission Petitioned for Relief

While the Railroad Commission was considering the matter, a further hearing was requested and held in Austin on October 6, 1941. At that time, Zeppa proposed to the commission an amended plan which he felt would be more practical than the one originally submitted, would be in the interest of conservation and for the benefit of all of the oil producers

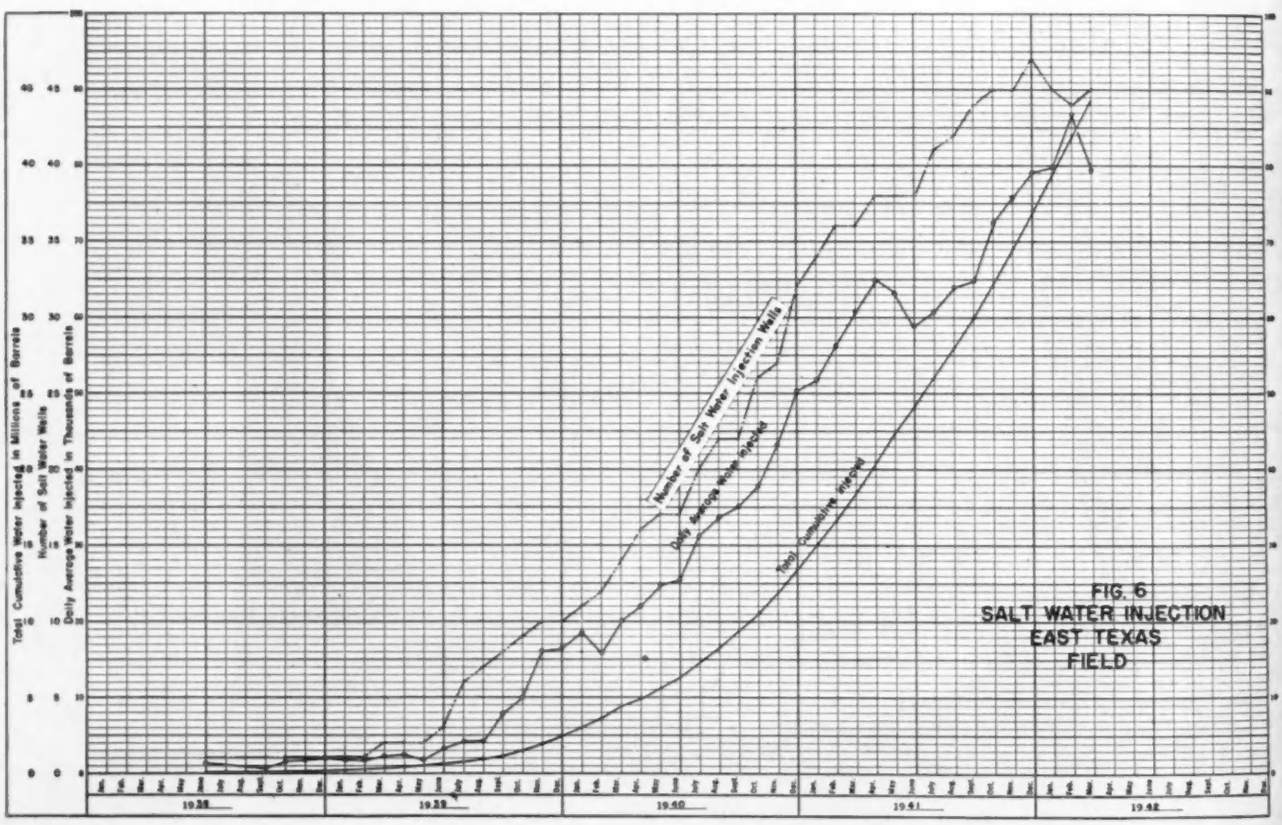

FIG. 6
SALT WATER INJECTION
EAST TEXAS
FIELD

it was our job to build the best equipment we knew how to build — to offer the best service of which we were capable • • • We did these things and you oil men did the rest • • •

But there is something infinitely more satisfying than the judgment you rendered for our equipment • • • This something is made up of the friendship, confidence and good will you have given us • • • And part of this something is your teaching us that there is something more in this world than just charging and paying, and buying and selling • • • Yes, in these things we have found the real and abiding happiness of our forty-five years of service to the oil industry • • •

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in the East Texas field. The new proposal provided for an additional allowable of one barrel of oil for each fifty barrels of salt water returned to the sand and would authorize the drilling and completion of injection wells by a salt water disposal company organized for the purpose of collecting water from various leases in the field and returning it to the Woodbine sand.

At the same time, a suggested order was presented to the commission which included in addition to the extra allowable for the return of salt water, a provision that wells producing more than one hundred (100) barrels of salt water per day be permitted to be shut in and the allowable taken from other wells on the same lease. The proposed order also provided that a lease which had only marginal wells be permitted to produce the additional oil from other leases.

Additional Oil Allowable Granted for Return of Water

Following this hearing, the Railroad Commission on November 20, 1941, issued Order 6-3142, effective January 1, 1942, in which the additional allowable of one barrel of oil for every 50 barrels of salt water returned to the sand was granted, but the provisions of shutting down one hundred (100) barrels or more water wells and the transfer to other leases of the additional allowable (by reason of water injected) were omitted.

Previously, the Railroad Commission in its Order 6-1456 issued on March 29, 1940, had permitted the allowable of an oil well, which had been converted to a salt water disposal well, to be produced from the other wells on the lease. In the November 20, 1941, and subsequent orders, this provision has been carried forward.

Following the issuance of the November 20, 1941, order by the Railroad Commission, a meeting of East Texas operators was held in Dallas on November 25, 1941, for the purpose of discussing the order and considering plans for a community field-wide salt water disposal system. From this meeting a group was organized which became known as the "East Texas Salt Water Disposal Group." At this meeting, E. DeGolyer, director of conservation in the Office of the Petroleum Coordinator, expressed much interest in a field-wide plan for salt water return to the sand as a much needed conservation measure and strongly urged immediate action.

Field-Wide Salt Water Disposal Plan Suggested

A field-wide plan for the disposal of salt water was suggested to the group by Col. W. H. Mead, of the Salt Flat Water Company, who had been working on the East Texas problem for several weeks. He presented information which showed the amount of salt water being produced and injected in various divisions of the field together with an estimate of the cost to enlarge the disposal facilities to take care of all the water produced. After the report had been presented, it was proposed that one company be formed to take care of all the salt water disposal in the field and that the company be organized on the basis of taking over the present injection wells in addition to the drilling of additional wells. The proposal met with general agreement by the group and committees were named to carry on the work.

After much work had been done in estimating the cost of additional facilities for disposing of the remaining salt water in the field and legal difficulties involved in the formation of a salt water disposal company were considered, the group met in Dallas on January 8, 1942, and organized the "East Texas Salt Water Disposal Company," a Texas corpora-

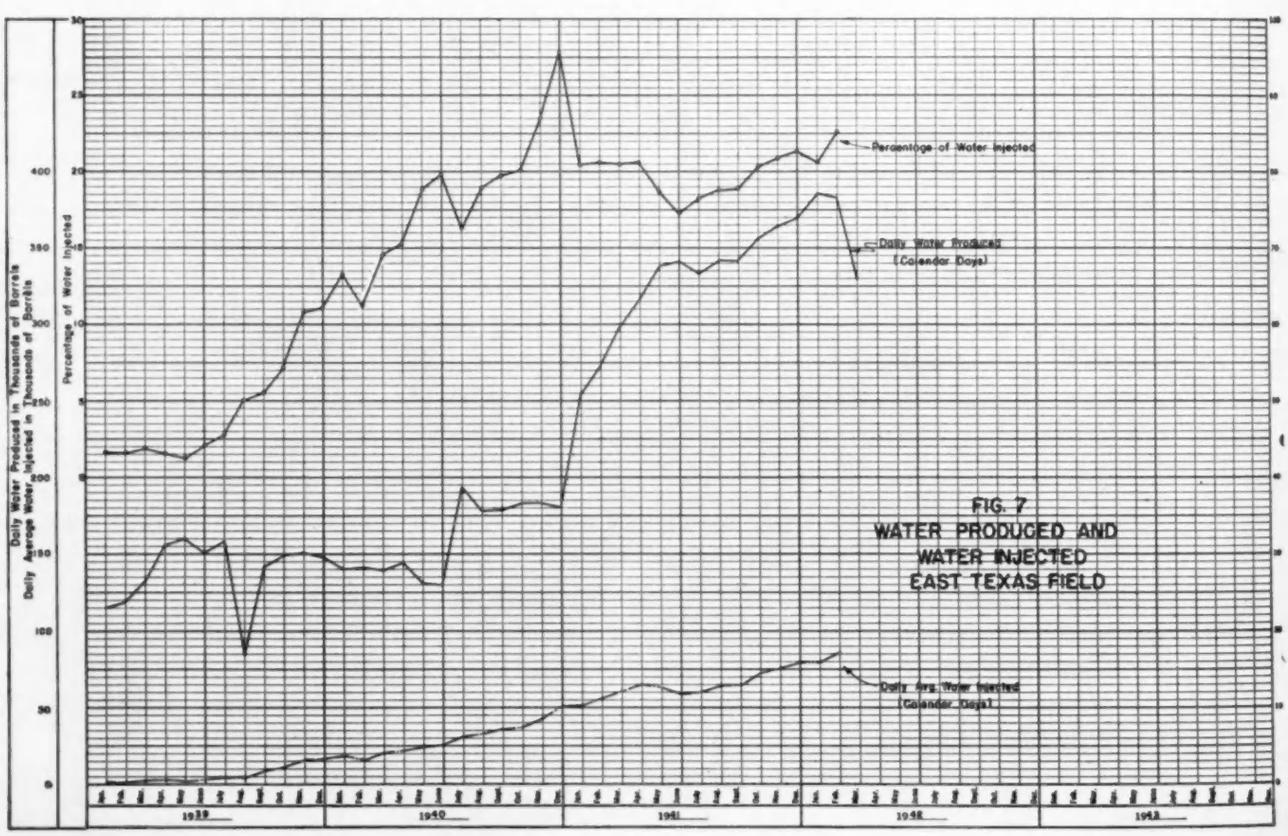
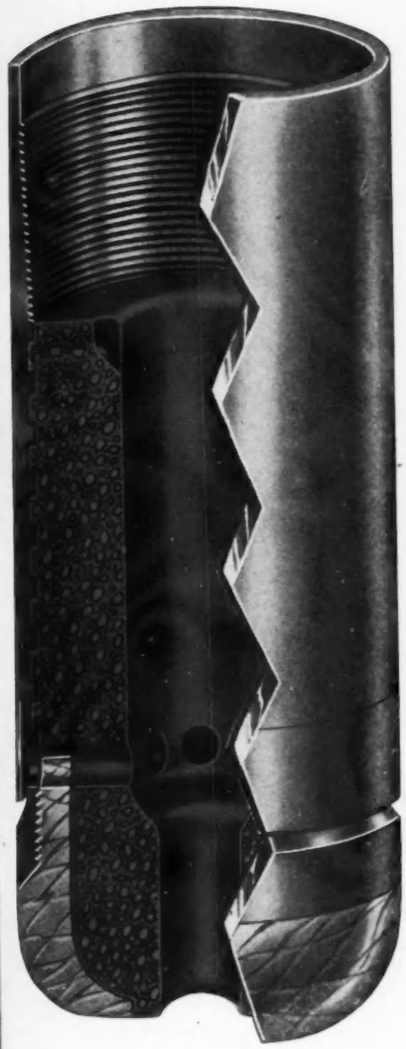


FIG. 7
WATER PRODUCED AND WATER INJECTED EAST TEXAS FIELD



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tion with a capital stock of $25,000 to which twelve individuals subscribed:

Individual	Company Affiliation
E. H. Blum	The Atlantic Refining Company
D. R. Gladney	Magnolia Petroleum Company
J. G. Pew	Sun Oil Company
A. H. Meadows	General American Oil Co.
B. W. Payne	Iowa Payne Oil Company
Joe Zeppa	Delta Drilling Company
C. R. Starnes	C. R. Starnes, et al
David Frame	Humble Oil & Refining Company
G. L. Nye	Tide Water Associated Oil Company
A. M. McCorkle	Stanolind Oil & Gas Company
A. E. Groff	Shell Oil Co., Inc.
L. E. Barrows	The Texas Company

Eight of the subscribers were large operators and four were smaller operators. Bryan W. Payne, of Iowa Payne Oil Company was elected president of the corporation, Don. R. Gladney of Magnolia Petroleum Company, vice president and John G. Pew, of Sun Oil Company, secretary-treasurer. At the meeting on January 8, 1942, it was decided that a request should be made to the Railroad Commission for a further hearing on the matter of transferring the additional allowable for the return of salt water and the privilege of shutting down wells producing large quantities of salt water.

Further Hearings Held by Railroad Commission

Following such a request, the Railroad Commission held a hearing on January 20, 1942, for the purpose of hearing additional evidence relating to the injection of salt water in the East Texas field. On February 20, 1942, the commission issued Order 6-3437, effective April 1, 1942, in which the transfer of the additional allowable granted by reason of the return of salt water to the sand, could be transferred to leases other than the one on which the water was produced. The order also permitted wells producing more than one hundred (100) barrels of salt water per day to be shut in and the allowable taken from other wells on the same lease. The provision with respect to the shutting down of large water wells was subsequently made effective March 1, 1942, by the commission (Order 6-3456) on February 25, 1942.

Large Water Wells Shut Down

In line with the commission's order permitting water wells producing one hundred (100) barrels or more of salt water to be shut down, there were 79 water wells shut down during the month of March, 1942, which had a daily salt water production of 20,176 barrels of salt water. During April, 1942, 90 large water wells were shut in with a reduction of 22,729 barrels of salt water per day. The operators who have shut down water wells are shown in Tabulation 3.

More operators are urged to consider the advisability of shutting in large water producing wells and taking the oil allowable from other wells on the same lease producing less water. The water wells are permitted under the commission's order, to be shut down and the allowable transferred for a period of six months before again testing the productive capacity. After establishing the rate at which the water wells can at that time produce oil, the water wells may again be shut down for another six-month period. At the hearing before the Railroad Commission on January 20, 1942, the testimony showed that there were 1292 water wells in the field producing 100 barrels or more of salt water per day, that these wells had a daily oil allowable of 20,332 barrels and produced a total of 358,056 barrels of salt water per day —this is an average of 15.74 barrels of oil and 277.13 barrels of salt water per day. It was estimated at that time that the daily production of salt water could be reduced approximately 161,000 barrels per day by shutting in water wells on leases where the oil allowable could be produced by other wells on the same lease. It is believed that a much more substantial volume of salt water can be shut in than the records for March and April (1942) indicate.

Transfer of Allowable for Water Injected

As encouragement to the operators in the East Texas field to return salt water to the reservoir, the Railroad Commission granted an extra allowable of one barrel of oil for every 50 barrels of salt water returned, provided all salt water produced on the lease was returned (Order 6-3142, effective January 1, 1942). Many leases on which a considerable volume of salt water was produced, were unable to produce the additional oil granted by the commission because the wells were produced to capacity as marginal wells. These leases were confronted with the necessity of disposing of relatively large quantities of salt water, but unable to produce the additional oil to help pay the cost of returning the water to the sand.

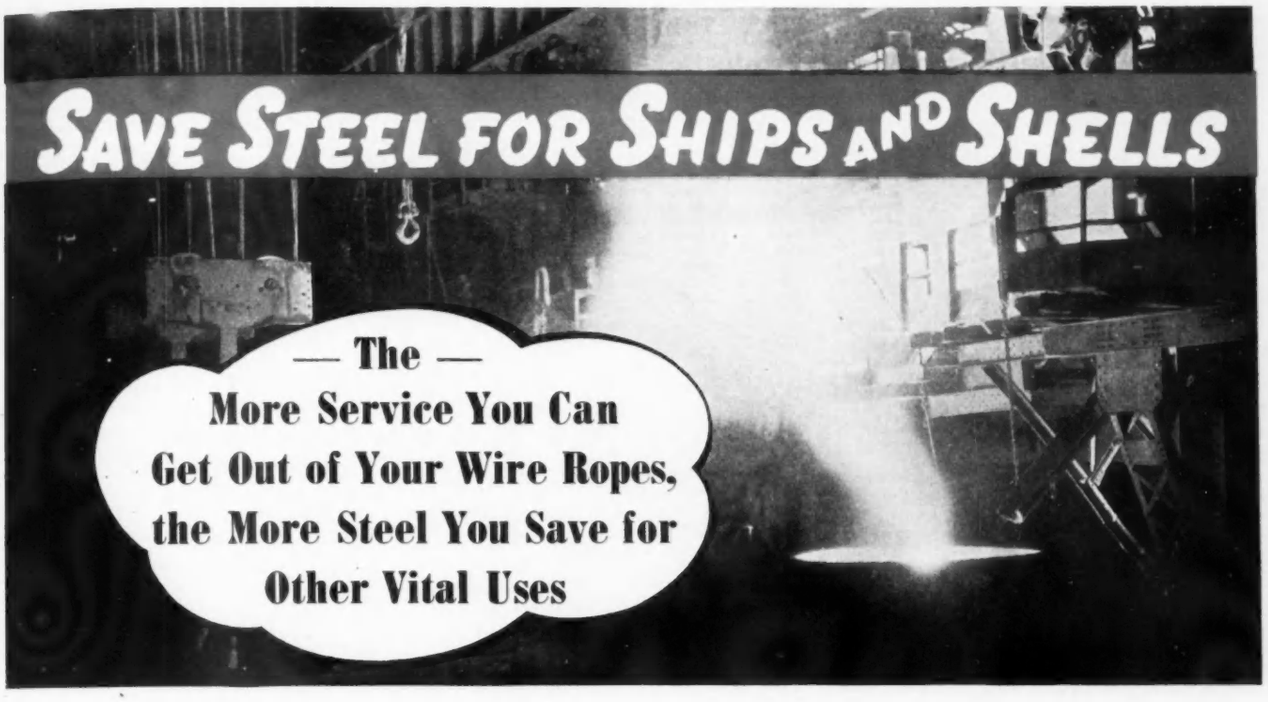
The Railroad Commission, in a further effort to promote conservation in the field and increase the ultimate recovery of oil from the sand, permitted, by its order of February 20, 1942 (Order 6-3437), an operator to produce the additional allowable oil for returning all his water to the sand, from any lease or leases owned by him. When a salt water disposal company takes the operator's salt water and returns it to the sand for him, the same commission order permits that operator to assign all or any part of the right to produce the additional allowable oil to any other operator or operators in the field, or to a salt water disposal company as all or part of the compensation for returning the salt water to the Woodbine reservoir. The salt water disposal company may sell the right to produce additional oil received by it as compensation for returning salt water to the sand instead of arranging for the production of such oil.

Therefore, an operator whose lease is unable to produce the additional oil granted by the commis-

Tabulation 3
Water Wells (100 Barrels or More) Shut Down

As Provided by Railroad Commission Order 6-3437

OPERATOR	Wells Shut Down	Water Production Barrels per Day
Cities Service	5	1,134
Constantin	3	1,049
Felsenthal	2	360
General Crude	3	828
Gilliland	4	690
Gulf	7	1,923
Humble	2	357
Iowa Payne	1	389
Lacy	1	313
Magnolia	1	375
McMahon	3	824
Meco	2	900
Phillips, B. F.	1	112
Shell	1	202
Sinclair Prairie	24	5,915
Stanolind	3	898
Starnes	2	966
Stein	1	288
Sun	22	4,862
Tide Water	2	353
Total	90	22,729
Average per well	..	253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Tabulation 2

Compilation of Water Production by Sections in the East Texas Field

(Section Numbers Correspond to Divisions Indicated on Figure 5 Map)

Section Field	County	Total Wells	Water Wells	Barrels of Water Produced	Water Injected Barrels	Percent Water Injected	WATER NOT INJECTED		Present Number of Injection Wells	Estimated Present Injection Capacity Barrels	Possible Percent Injection at Present Capacity
							Barrels Water	Percent Water			
1	G. & U.	773	384	19,681	1,373	7.0	18,308	93.0	1	4,000	20.3
2	G	1,190	10	3	0	0.0	3	100.0	0	0	0.0
3	G. & U.	1,328	238	24,003	2,975	12.4	21,028	87.6	1	4,000	16.7
4	G. & U.	1,555	386	29,297	2,708	9.2	26,589	90.8	3	12,000	41.0
5	G. & U.	560	418	27,288	2,968	10.9	24,320	89.1	2	8,000	29.3
6	G. & U.				No Water	in this Section					
7	G	1,019	227	20,998	1,348	6.4	19,650	93.6	2	8,000	38.1
8	G	1,125	367	35,829	5,540	15.5	30,289	84.5	3	12,000	33.5
9	G				No Water	in this Section					
10-A	G. & R.	543	256	32,049	1,366	4.3	30,683	95.7	3	18,000	56.2
10-B	R	1,967	640	68,355	3,083	4.5	65,272	95.5	3	12,000	17.6
10-C	R	1,389	502	37,222	2,574	6.9	34,648	93.1	3	18,000	48.4
11	R				No Water	in this Section					
12-A	R. & S.	1,308	498	20,269	2,891	14.3	17,378	85.7	3	18,000	88.8
12-B	R. & S	2,327	1,060	94,212	30,619	32.5	63,593	67.5	13	52,000	55.2
12-C	G. & R. & S	666	194	32,363	24,018	74.2	8,345	25.8	10	40,000	100.0
13	R	333	109	3,609	865	24.0	2,744	76.0	0	0	0.0
	Total	16,083	5,289	446,179	82,328	18.5	363,851	81.5	47	206,000	46.2

sion is encouraged to arrange for the disposition of his salt water to a salt water disposal company. The salt water disposal problem of the individual operator is thereby solved and the reservoir benefited by the return of the water to the sand. The Railroad Commission is to be congratulated for its help in promulgating orders designed to aid the operators of East Texas in disposing of their salt water and in conserving the reservoir energy in the field.

Production and Injection of Salt Water by Districts

The map in Figure 5 shows how the field could be divided into natural drainage districts so that the collection of salt water could be most easily handled. Tabulation 2 has been prepared on these same drainage districts and shows with respect to each area, the quantity of salt water produced, the volume returned to the sand, the number of injection wells, their injection capacity and other related data.

Conclusion

The East Texas Salt Water Disposal Company is doing all it can to expedite the return of salt water to the Woodbine sand. To some of you it may appear that the company has been slow to get started, but the delay has been unavoidable. The company was organized, or secured its charter as a Texas corporation, January 20, 1942, having a capital of only $25,000. The stockholders and directors, by resolutions passed January 28, 1942, decided to undertake to increase the capital of the company from $25,000 to $2,000,000 by selling 19,750 shares of common stock, par value $100, at $100 a share cash, thereby securing capital thought to be reasonably adequate to obtain facilities to handle about 400,000 barrels of salt water per day, including injection of a large part of it into the Woodbine sand. Such a program came within the provisions of the Federal Securities Act of 1933 as amended, and the Securities Act of Texas. The company has undertaken to comply with those acts. It filed registration statement and other documents with the Federal Securities and Exchange Commission on April 13, 1942, and such commission declared the effective date of the registration to be April 17, 1942. A permit to undertake to secure subscriptions to the proposed increase in capital was issued by the Secretary of State of the State of Texas on April 24, 1942.

A prospectus dated April 25, 1942, has been printed which gives much information about the company, its proposed operations, and the proposed increase in capital. I am not here undertaking to secure subscriptions or to repeat or digest the information given in the prospectus. If you are interested, a copy of the prospectus and a subscription contract will be delivered or sent to you. The office of the company is 706 Citizens National Bank Building, Tyler, Texas. In the meantime, the company is undertaking to get information and to make studies which will enable it to act promptly if the increase in capital be obtained. Arrangements have been made so that W. S. Morris, an engineer employed by a group of operators in the field, may temporarily give a part of his time to the company, acting as temporary manager, but largely engaged in making and supervising studies to facilitate the program outlined.

Once more I say that a printed prospectus and subscription contract will be delivered upon request. I believe that every owner of a producing oil well in the East Texas field, as well as other persons concerned with the welfare of the field, will be interested in the information and the program set forth in the prospectus and contract.

Acknowledgment

The author is indebted to W. S. Morris for assistance in the preparation of this paper and to many others who contributed to it.

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Florida Leasing Activities Showing Increase

By JOSEPH G. HEYCK

There are some who believe that Florida may well come under the category of a strategically located area which could stand additional oil prospecting attention at this time, when it is deemed desirable that petroleum sources be found more closely to the heavy consuming East Coast of the United States. That some major companies consider Florida has ultimate possibilities is evidenced by the amount of acreage now under lease in the state, which represents a good solid investment, both in initial considerations as well as in rentals.

Much of the Florida acreage now under lease was taken the latter part of 1939 and the first part of 1940 in the southern part of the state by Peninsular Oil & Refining Company. All this acreage was assigned to Humble Oil & Refining Company in early 1941. It included 1,000,000 acres in Collier, Hendry and Lee counties, 434,000 acres scattered through the Panhandle area of West Florida, and some 110,000 acres in the south-central part of the state. Sun Oil Company was the only other large leaseholder prior to 1940, having a total of 116,000 acres scattered through the west-central part of the state, and about 1200 acres in Collier and Hendry counties.

Last year saw a great deal of leasing in various areas of the state, and the first concurrent and competitive leasing by several major companies. This article is chiefly concerned with the leasing activities of the major companies, for, though there is considerable acreage under lease to brokers and various individuals in the north and west parts of the state, most of it is held under some sort of option with more or less vague promises of development, and very few leases have been recorded. The huge state leases on the submerged lands along the west and south coasts of Florida will be mentioned later.

There is at this time a total of 3,605,000 acres under lease to major companies in Florida as follows:

Gulf Oil Corp.	592,000 acres
Humble Oil & Refining Co.	1,720,000 acres
Magnolia Pet. Co.	43,000 acres
Pure Oil Co.	511,000 acres
Sinclair-Prairie Oil Co.	101,000 acres
Sun Oil Co.	638,000 acres

Of the total above, approximately 1,500,000 acres was taken during 1941, and 424,000 acres so far in 1942. The acreage under lease at the present time lies in 38 counties out of the 67 counties in the state.

Without going into geological discussion, and purely for convenience, this leasing can be shown in five general areas: 1. Panhandle or West Florida; 2. West Flank of the Ocala Uplift; 3. East Flank of the Ocala Uplift; 4. South-Southwest Flank of the Ocala Uplift; 5. Everglades Basin of the south part of the peninsula. A tabulation of these areas shows the following acreage under lease at this time:

1. Panhandle	948,500 acres
2. West Flank of the Ocala	780,100 acres
3. East Flank of the Ocala	180,000 acres
4. South-Southwest Flank of the Ocala	666,400 acres
5. Everglades Basin	1,030,000 acres

1. The Panhandle Area includes that portion of the state west of Tallahassee, extending to the Alabama line. In April, 1941, Magnolia Petroleum Company acquired a spread of 43,000 acres in the western part of the area, but there was no further leasing by any of the companies until the latter part of the year and early 1942, when The Pure Oil Company took its acreage in the counties bordering and near the Apalachicola River. This leasing, together with the acreage held by Humble, which was acquired prior to 1941, makes up the total shown above. This general area has also seen a great deal of scattered leasing by brokers, their total holdings running to almost 150,000 acres, and including acreage in nearly every county in western Florida. Mention should be made of the block taken by R. T. Myers et al in Walton County, consisting of 42,000 acres south of De Funiak Springs, which was taken in October, 1941, and on which a well is now drilling.

2. The Sun Oil Company took the first acreage on the West Flank of the Ocala Uplift the latter part of 1940, this being the 116,000 acres mentioned above. During the first part of 1941, and at intervals during the year, the Sun, Gulf, Sinclair-Prairie and Humble Companies took 664,000 acres scattered from just south of Tallahassee down along the west side of the state to above Tampa. On the extreme northwest edge of this general area, Lloyd Brown et al assembled a 53,000-acre block in November, 1941, lying mostly in Wakulla County, but extending over into Leon and Jefferson counties, and have started a 6500-foot test on it at Wakulla. This well should prove of great interest and geologic value.

3. Sun Oil Company was the only operator active in the area which is designated as the East Flank of the Ocala Uplift, taking some 180,000 acres during the middle of 1941.

4. The South-Southwest Flank of the Ocala Uplift saw considerable leasing towards the end of 1941 and first part of this year. As shown, Humble Oil & Refining Company had acquired some 110,000 acres in this area from Peninsular Oil & Refining Company, which acreage was taken in 1939 and 1940. In November and December, 1941, a total of 425,000 acres was taken by Gulf, Humble and Sun Companies, to which was added 131,000 acres by the same companies the first two months of 1942. From the above totals should be subtracted the 52,000 acres probably lost by the Gulf from their holdings in Highlands County, which acreage was included in the recent purchase of 110,000 acres in Highlands and Polk counties by the U. S. Government for an Army Air Force bombing range. The purchase was made in fee by virtual condemnation and without mineral reservation to the landowners.

5. The Everglades Basin in the south part of the state saw no leasing by any of the major companies in 1941. Humble's 1,000,000-acre

Collier Interests lease includes most of Collier County, and extends into Hendry and Lee counties. Sun Oil Company holds about 1200 acres in Collier and Hendry counties in small scattered leases.

In October, 1941, the state granted leases on the submerged lands along the coasts of west and south Florida, extending for several miles into the Gulf, to three operators. Florida Land and Exploration Company (A. E. Freel et al) has 1,500,000 acres along the extreme west coast of the state; J. Ray Arnold has 3,500,000 acres along the west coast of peninsular Florida; and Wm. G. Blanchard et al 7,000,000 acres along the coast around the south end of the state including the area of the Keys. These state leases are really eighteen month geophysical options, with small rentals on selection blocks in lieu of drilling, though some drilling is exepcted to be done. The state hoped to encourage development by granting these leases, and so far some geophysical work has actually been done in some of the areas.

It is difficult to foretell just what effect the war will have on activities in this state. OPC is urging exploration work and wildcatting by established companies and reputable independents on worthwhile prospects as means to find new reserves, and this is encouraging some operators to come into Florida. There are prospects of others coming as partners in joint ventures. The fact that sizeable blocks, at low cost, with definite merit, and carrying low rentals, can be taken in Florida is proving attractive to such operators, many of whom are reluctant to shut down rigs and disband geophysical and drilling departments because of drastic curtailments of activities in proven areas. In spite of the fact that leading economists for government and industry point out the pressing demands for discoveries of new areas and increased reserves, published articles on drilling in the Gulf Coast of Texas and Louisiana continue to feature the starting, abandonment or completion as small distillate producers of 11,000-13,000 foot wildcats and extension wells, requiring huge strings of casing and tubing. The costs of a whole program of leasing, exploration and subsequent drilling in Florida compares favorably with the drilling costs alone of a single one of these massive failures.

Pipe Line Plans

[*Continued from page 13*]

111 miles of pipe line in Texas are being dug up for use. This project, it is said, involves construction of a loop by Texas-Empire Pipe Line Company to Tulsa or Cushing, using 30 miles of new pipe already on hand, and increasing the capacity of two lines to Sheldon, Mo., to pick oil up from the Texas line. The system will take about 30,000 barrels into Chicago. Existing lines eastward will be used, including 150 miles paralleling the present line of the Illinois pipe line across Ohio, to provide 25,000 barrels daily for delivery at Bayway, N. J.

Project 6, for a 20-inch line from East Texas to Salem, Illinois, and the companion project 9, for its conversion from crude to products, is not to be constructed if the 24-inch line contemplated in project 8 goes through.

A new application for War Production Board approval of the "big-inch" line will probably be made early this week. The amount of steel required will be cut approximately 100,000 tons—to about 300,000 tons—by plans to install pipe of varying thicknesses, using the heavier pipe only where conditions necessitate.

The recommendation provided that plans for the several projects may provide for the joint construction, ownership and operation of the lines; the sale, exchange, loan or pooling of crude or products wherever and to whatever extent may be necessary for operation at maximum capacity; and the use of pipe-line, transport, barge, terminal and storage facilities without regard to individual ownership wherever necessary for the most efficient operation.

Ickes Blasts

[*Continued from page 13*]

been repeatedly told—by the mayor of a large northern city, the governor of Florida and a prominent southern business man—of the existence of such facilities, but has never been able to secure lists of such boats from those informants.

Ickes condemned the Florida pipe line proposed by Senator Claude Pepper, declaring "we haven't got the barges, tugs or waterway" which the Senator proposed to use. In places, he said, the intracoastal canal is only six feet in depth and but little wider, and there is one section in New Jersey which never has been dug.

"A lot of people have told us about barges, and we ask where they are and how many there are and we can't get any answer at all," he commented, in discussing the use of the waterways which Pepper would link by a trans-Florida canal.

He also blasted the proposal of Representative Mansfield to spend $140,000,000 to construct a canal from the Mexican border and improve the existing waterways. Told by a newspaper man that Mansfield said the work could be done in 90 days, Ickes looked amazed but said nothing other than to point out that "we haven't the barges and we haven't the tugs."

House Committee Votes To Retain Depletion

Reacting to the Treasury's proposal for reformation of the depletion provisions of the revenue code, the House Ways and Means Committee on May 13, by a vote of 21 to 4, rejected the Administration recommendation.

Not only did the committee vote to continue the present 27½ percent deduction, but it agreed to retain the present option allowed operators to charge intangible drilling costs to either expense or capital.

Both the deduction and the option had been the subject of attack by the Treasury, which originally estimated a revenue of $80,000,000 could be secured by their elimination, later raising the figure to $208,000,000 on the basis of the corporation and income tax rates which it proposed.

During hearings on the Treasury proposals, the industry made a strong fight against any tinkering with the two provisions which they said were all that enabled many small operators to remain solvent. The producers had the backing of a definite majority of committee members who hailed from producing states and were familiar with the subject.

At the Treasury, the day following the committee's action, Secretary Morgenthau said he would press the matter again when the bill comes before the Senate

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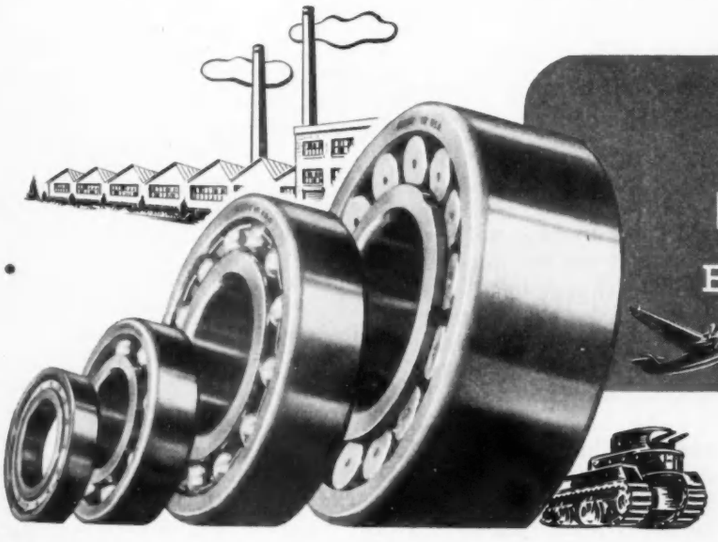


SKF

BALL AND ROLLER BEARINGS

Finance Committee this summer. The depletion allowance, he asserted, is one loophole which should be plugged.

WBP Takes Action on Spacing Violations

Determined to enforce compliance with its conservation measures, WPB last week cracked down on Bel-Air Oil Company, Los Angeles, enjoining it from producing any oil for three months from a well alleged to have been drilled in violation of Conservation Order M-68, suspending deliveries for the same period on any preference orders outstanding and ruling that no preference ratings or allocations of restricted materials shall be granted the company prior to August 11.

The board charged that the company spudded Twitchell 2 in Santa Barbara County subsequent to December 23, 1941, and that the well does not conform to a 40-acre requirement.

The action was the first of its kind to be taken against any member of the oil industry, it was said.

Joint Tank Car Group For Fuel Movement

Formation of a joint tank car subcommittee for the East, Middle West and Gulf Coast districts to carry out a seven-point program to increase deliveries of heavy-fuel oil to the Atlantic seaboard was ordered May 11 by Coordinator Ickes in a directive (No. 50).

The subcommittee would be charged with the responsibility of "obtaining maximum efficiency in the use of all tank cars employed by the petroleum industry, assuring that such tank cars are utilized to meet the critical problems of petroleum supply in each district."

The program laid down by the coordinator calls for:

1. Movement of 75,000 additional barrels of heavy-fuel oil daily from the Gulf Coast and 75,000 barrels daily from the Middle West.

2. Arrangement of East Coast refinery operations so that minimum amounts of crude shall be used by refineries which are making war products, and so that heavy-fuel-oil production will be increased at the expense of gasoline.

3. Apportionment of crude supplies among East Coast refiners so that all shall receive amounts in proportion to their runs during the last half of 1941.

4. Movement of an additional 100,000 barrels of East Texas crude into the East daily in order that refinery operations in the area may be maintained at 400,000 barrels daily.

5. Movement of 10,000 additional barrels of gasoline daily into the East by Great Lakes tankers.

6. Supplying of the southeastern states from points of entry on the Gulf Coast and the Mississippi River.

7. Utilization of rail facilities for movement of at least 100,000 barrels of oil daily up the Atlantic Seaboard from the south.

Congressman Cole to Be Custom Court Judge

Representative William P. Cole, Jr., chairman of the special oil subcommittee of the House Interstate and Foreign Commerce Committee since its creation in 1934, received a birthday gift from President Roosevelt May 11 in the shape of a nomination to be a judge of the United States Customs Court.

In an unusual move which was a tribute to the Congressman, the Senate took the nomination up immediately and confirmed him within a few minutes.

Cole, who was observing his 53rd birthday in a hospital, has been ill for some three months and, while his condition was said to be good, it is expected that some months must elapse before he can assume his position on the bench.

RFC Says no Change in Policy for Oil Loans

Officials of the Reconstruction Finance Corporation said last week no change has been made in their policy with respect to financial assistance to oil and gas producers.

They explained that it has been the policy not to make loans direct to such producers, but to participate with banks which do make such loans, up to the extent of 50 percent.

It was said that this system has been found to be workable, and that a number of producers have been aided in this manner. There was no indication that any consideration would be given to the making of direct loans, but it was stressed that oil men visiting RFC are given advice how best to secure needed financing through their banks which, in turn, can come to the agency for help.

Tank Car Control Effective June 1

Effective date of the Defense Transportation order placing tank car use and movement until control has been postponed from May 15 to June 1 in order to give shippers more time to file applications for permission to move cars affected by the order.

The Office of Defense Transportation earlier this month set up a section of tank car service to administer a program which prohibits the movement of any loaded tank car without permission, except for the transportation of oil into the Eastern and Northwestern curtailment areas or moving in excess of 100 miles over the shortest available route.

Boyd Urges 24-Inch Line to East Coast

Increased support for the proposed Texas-New York pipe line was evidenced in Congressional circles last week as a result of the imposition of gasoline rationing, but WPB officials gave no indication as to whether they would change their mind on the granting of priorities.

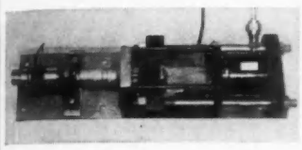
As Coordinator Ickes prepared to make another attempt to secure preferences for the steel, William R. Boyd, Jr., chairman of the Industry War Council, warned that nothing less than the 24-inch pipe line would solve the East's supply problem.

Boyd, outlining the many steps already taken or planned for raising deliveries to the East, declared that at best little more than 900,000 barrels a day could be assured, leaving a gap of 365,000 barrels, which could be supplied only by a 24-inch line from East Texas to New York, via Salem, Illinois. The line could be completed to Salem in approximately six months, he said, and to New York in about a year, after the necessary steel has been made available.

In the field of "Balance", a problem confronting the engineer may be one of preventing or correcting unbalance or of maintaining constant loads or equilibrium in a test system. Some instruments which are useful in these problems are:

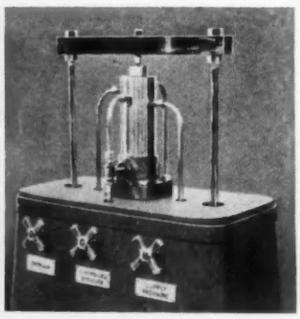
BALANCING EQUIPMENT

A portable set of vibration equipment with which the amount of unbalance in motors, generators and other rotors can be determined and corrected.



TORQUE MEASURING SYSTEM

A flexible system for the accurate measurement of torque or twisting moment in shafts, bolts, and test or production equipment. It consists of a torquemeter pick-up, indicating or recording instrument, test frame and other necessary equipment.

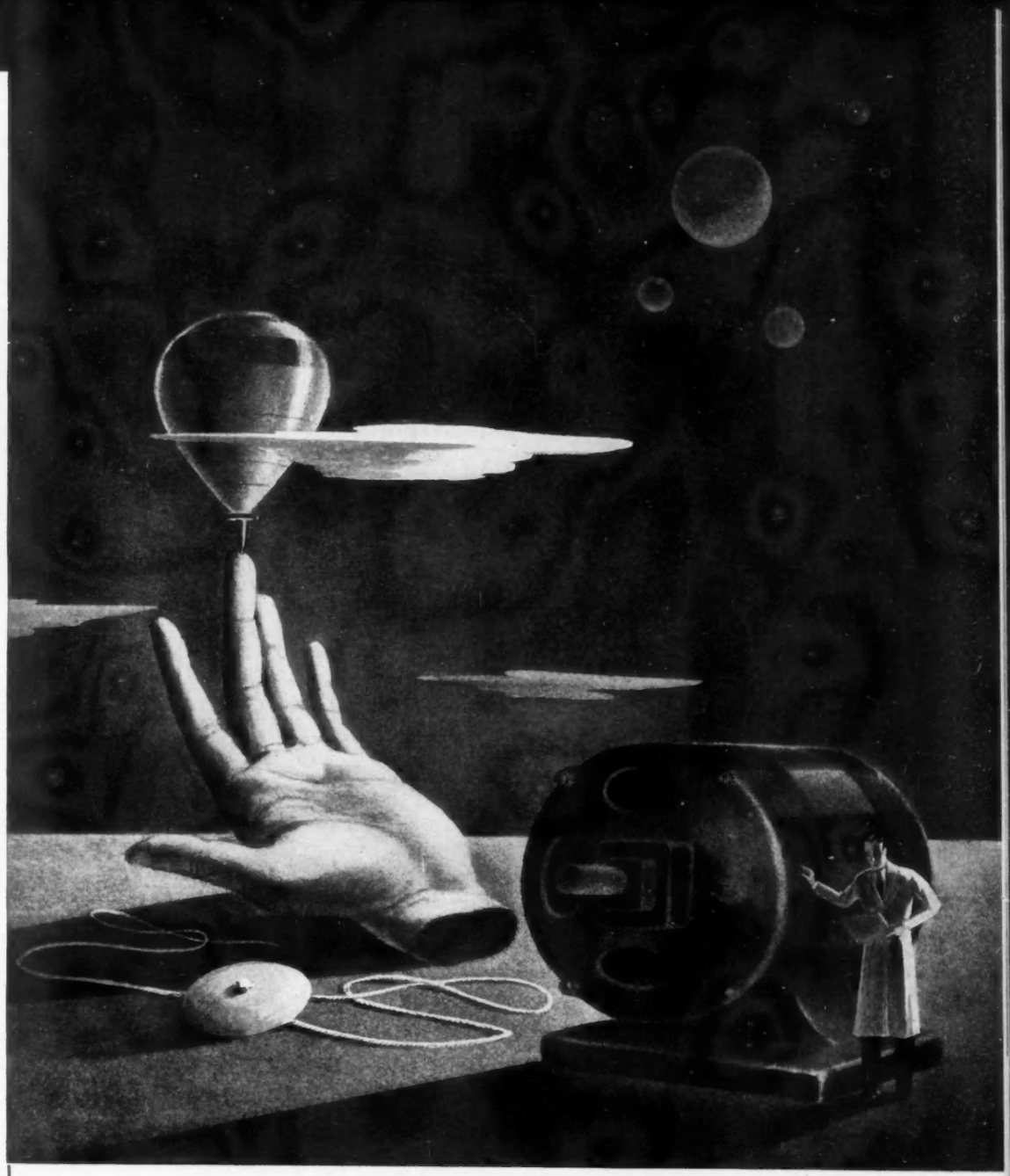


LOAD MAINTAINER AND CONTROL VALVE

An answer to the difficult problem of maintaining loads or pressures in test assemblies with safety and accuracy.

* * *

Other instruments in the field of resistances, reactions, and loads are: Proving Rings to measure static loads or reactions in equipment or structures; Load Plugs to measure pressures or loads in rolling mills and other machinery; auxiliaries, amplifiers, recorders.



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PRACTICAL OPERATING *Hints* FOR

1. *METERING*

Portable Shelter Prolongs Meter Life

INSTEAD of building an individual housing around each orifice meter, one company prefers to house the entire bank of instruments under a single structure.

Closed on all sides but the front, the lightly constructed wood and sheet iron building provides ample protection from the prevailing direction of winds and storms, and permits storage of extra charts, ink supply, and small tools. Flexible tubing brings line pressures up to the meters.

A single light mounted under the eaves of the roof illuminates the entire bank when readings are made at night. The structure may be removed, and with little difficulty replaced over a similar meter bank in another part of the field.

Corrugated roof and protection on three sides give recorders ample weather safeguards, and enable charts to be changed or readings taken without danger of destroying permanent charts.

THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.

The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."

2. *PUMPING*

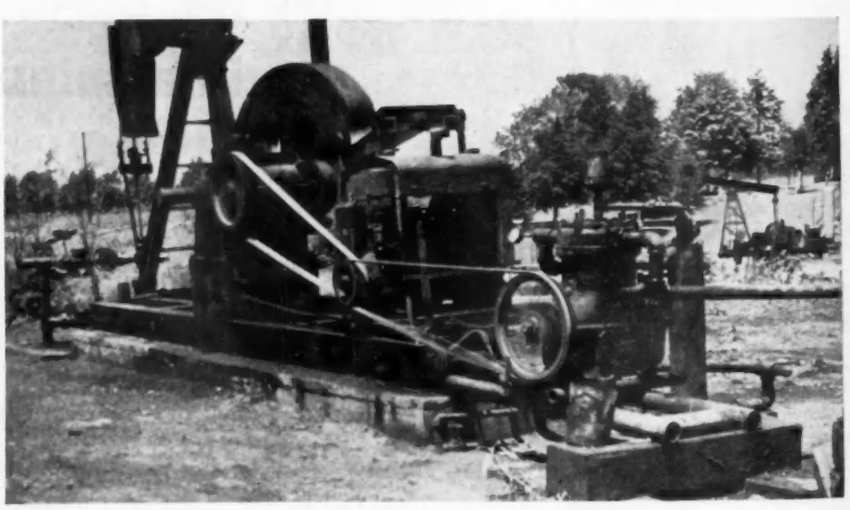
Auxiliary Drive for Vacuum Pump Unit

WHEN a vacuum pump is part of the well set-up, it may be driven from the engine powering the pumping unit by mounting it on a heavy skid and installing it to the rear of the engine.

By setting the vacuum unit skid against the end of the concrete foundation for the pump, means is provided for adjusting V-belt tension by wedging or shimming between end of skid and concrete.

If the vacuum line be tied to the pump with a swing, it is possible to tighten the V-belt by varying the blocking at the outer end of the skid, lowering the skid to increase the distance between driver and driven pulleys and thus absorbing and undesired slack.

Powering the vacuum pump from the pulley which provides the drive for the reduction gear divides the load on the outer bearing of the engine shaft, and equalizes or at least partially eliminates the side pull sustained when drive is all at one side of the unit.



Equipping the power unit with sheave carrying extra groove permits powering of vacuum unit as well pump is being operated and concentrates all lease equipment at one site.

3. *SERVICING*

Separable Rat Hole Speeds Work Overs

SINCE derricks now are being left off many newly completed wells, the rat-hole pipe generally is cut off near the ground level and covered with some makeshift wooden plug or cover, or, as is frequently done, by welding a steel cover over the exposed end.

In anticipation of the day when a clean-out rig may have to be set

THE PRODUCTION MAN

Ground level collar carries service extension during work-overs and cover for stand-bys.

up, the production department of one company has adopted a simple, inexpensive practice. Instead of cutting off part of the rat-hole pipe, it is arranged beforehand that a collar be landed at ground level, so when the drilling rig is moved off, the short riser to the derrick floor may be unscrewed and removed. It is then a simple matter to screw on a short joint when the clean-out rig is set up.

To protect the threads of the collar and still close the opening of the pipe, this company uses a disc made of 10- or 12-gauge steel. Four 3-inch tabs are cut and bent back away from the edge of the disc, allowing just enough friction in the I.D. of the pipe to prevent its being removed, except by a direct upward pull.

When in position, the cover closes the entire opening, with a 1-inch overhang all around the circumference except at the tab cut-aways.

4. LIGHTING

Spotlight Stand Aids Night Operation

CONCENTRATING illumination at points of activity is necessary if night operations are required in maintenance of wells and other equipment. Adjustable and readily transportable spotlights serve best for such illumination as is not provided by fixed lease lights, such units being plugged into receptacles in the lease circuit or powered by portable generating plants, as company policy dictates.

A serviceable tripod, heavy enough to withstand oil-field usage and to remain where set, may be constructed from 2-inch pipe, welded into a unit with wide base, and with standard or smaller diameter pipe to carry the swivel attachment on the spotlight or floodlight fixture.

If the lower ends of the three short legs of the tripod be shod with with small shoes of plate steel, ample bearing is afforded to insure support even in marshy land, and to give weight enough to the base to insure against blowing over or upsetting in case of tug on the power wires.

Welded tripod with plate feet for support in marshy terrain is set to give desired light concentration, with heavy cable plugged in to service truck or power line energy source.

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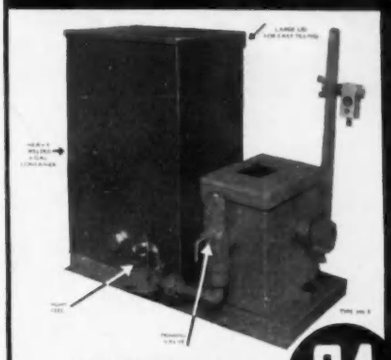
CHEMICAL INJECTOR



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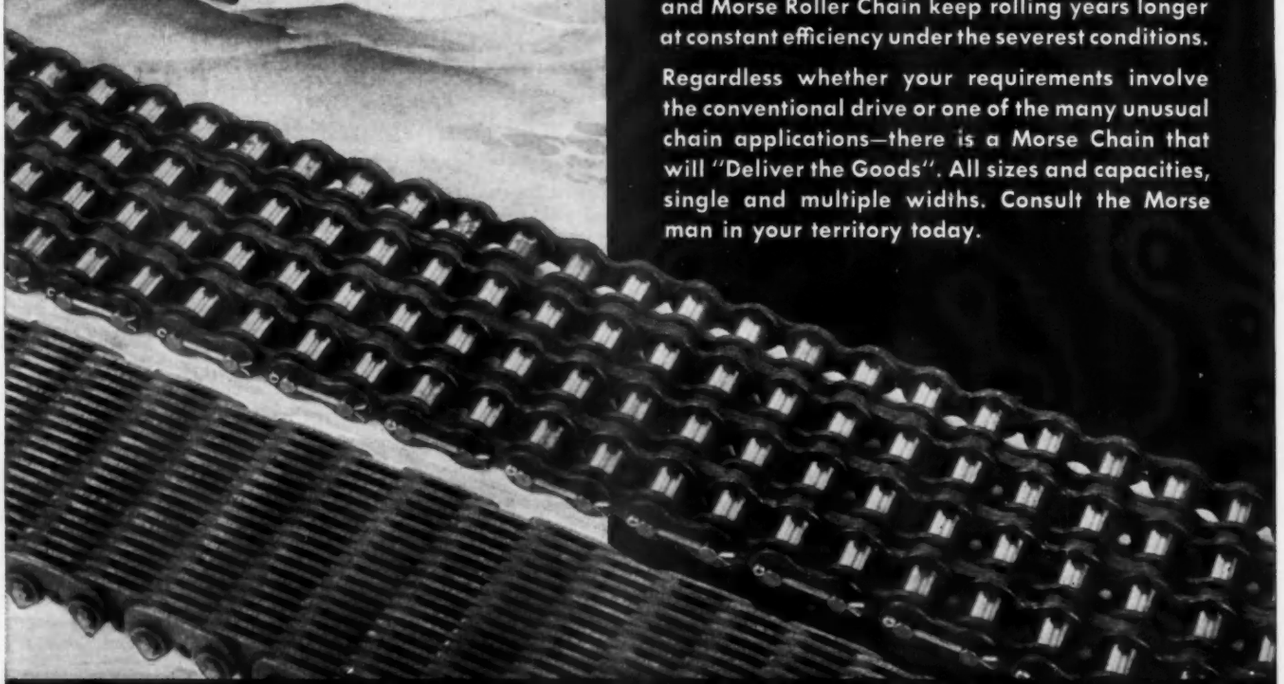

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Texas Order Continues April Production Rate in Defiance of Coordinator's Figure

The Texas Railroad Commission issued an order Friday fixing a basic allowable of 1,376,305 barrels daily for the last 13 days of May. All fields will be allowed to produce at the scheduled rate during this period. Likewise, all fields were ordered closed in on May 16, 17 and 18. The order for the first half of May expires May 16.

The new order was issued in defiance of an OPC recommendation for production of only 960,000 barrels daily. Coordinator Harold L. Ickes had indicated he would seek to force reduced allowables through a WPB order if the commission exceeded the figure recommended. To this action the commission countered by asking Donald Nelson's permission to present its case before any such order was issued. (See page 12.)

Commissioner Sadler said that under the new order, all specially favored fields would be eliminated, but at the same time a full supply of oil would be provided from fields producing oil for the war needs. He said that the commission would hold a statewide hearing on May 26 to take evidence upon which to base June allowances.

Sadler pointed out that under-production in March totaled 92,212 barrels daily, or 6.7 percent of the allowable assigned. This left a net production of 1,284,093 barrels of prorated oil plus 117,945 barrels daily of unprorated distillate and condensate. The total production, therefore, averaged 1,402,038 barrels per day. Nominations filed at the hearing last Monday totaled 1,412,755 barrels.

Thus if under-production and unprorated oils are the same for the last half of May as they were during March, the production will about equal nominations.

In a statement Commissioner Jerry Sadler said some purchasers reported a different demand in Washington to that which was offered in Austin. He announced that he was going into the Army and that he would not leave an order which provided for less than the firm nominations.

Commissioner Olin Culberson said that he also favored fixing the allowable at nominations. Commissioner E. O. Thompson was out of the city but he had indicated he thought this plan was proper.

In his statement Sadler said:

"Crude oil purchasers at yesterday's statewide hearing made firm nominations to buy 1,400,000 barrels daily during the last 15 days of this month. The purchasers gave this amount against the 960,000 barrels daily which has been set by the Office of Petroleum Coordinator.

"From all indications it appears that the major companies are trying to close in on the independent operators, and one example came to light to bear this out. This certain company's Washington representative requested that the OPC fix Texas' allowable at 360,000 barrels daily, and the same company's representative told this commission that his company's nominations were all firm.

"The commission's records show that on March 1, there were 93,256,000 barrels of oil in storage, and on April 25 storage was 94,323,000 barrels. This means that there are approximately 50,000,000 barrels of empty refinery storage, a good part of which is located at plants operated by independents throughout the state. * * *

"I will not sign any order for the remaining 15 days of this month which does not have an allowable figure of 1,400,000 barrels daily — the amount which purchasers declared was firm and that they would take. While oil is ammunition for this warring world, at the same time we must not overlook and forget the working man, the aged mothers and fathers, the lame and blind children back home who gain their livelihood either directly from the oil industry or from taxes which it pays."

Meanwhile the commission issued figures showing that the total daily production during the first 10 days of May was 1,150,000 barrels approximately, plus 96,000 barrels of distillate, condensate, and similar products, which brought the total to 1,250,000 barrels. This was 290,000 in excess of the figure set by the coordinator.

The announcement by Coordinator Ickes from Washington on Thursday that if the Texas Railroad Commission failed to follow his recommendation he could call on the War Production Board for an order that would be effective, brought from Commissioner Culberson the following statement:

"With purchasers and refiners who have vital war contracts reaffirming, and in some cases increasing, their nominations for the last 16 days of May, I feel that the oil industry in Texas cannot be criticised for being in the position suggested by the attitude of Petroleum Coordinator Mr. Ickes of having 'too much too soon' rather than when the transportation bottleneck is broken of having 'too little too late.'

"After 15 days of operation under a continuation of the April permissive flow, there was every indication at the public hearing on last Monday that those who have the responsibility for refining vital war necessities emphatically indicate that they need more oil instead of less oil.

"Texas, as is the case with her position on cotton, can meet all demands made of her for the very vital necessary war materials, petroleum and its products, and when the transportation bottleneck is broken, as it surely will be shortly, there will be a greatly accelerated demand for Texas oil and unless there is a backlog against that time, we will find ourselves with a relation to this tremendously important war material in the same boat as many other critical materials have been and that is 'short'—again too little too late. I certainly do not want to see this.

"It is incredible to me that anyone should think that the purchasers and refiners who know their requirements and position on vital war contracts should not be in a better position to indicate what their requirements are than could anyone else. The fact that the industry in Texas has continued to absorb those types of crude adapted to the war needs is evidence, to me, that the commission's action thus far is justified in its effort to do everything possible to see that sufficient oil is made available for the war effort. The nearly one million barrel decline in refinery products storage of April 1, is another indication that with fifty million barrels of empty refinery storage the commission's action, in continuing the April order until it could definitely ascertain the actual requirements for the remainder of May, is justified."

Purchasers Give Figures

Demand for approximately 1,400,000 barrels daily during the last half of May was reported by operators at the special statewide proration hearing held in Austin, May 11. Although many larger purchasers reduced their nominations materially they were still over a half-million barrels above the estimated consumer demand reported to the com-

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mission by Petroleum Coordinator Ickes.

In addition to the crude oil demand listed, there is a daily production of approximately 96,000 barrels of unprorated condensate, distillate and natural gasoline; thus, if the commission followed the nominations, the total Texas production would be about 1,500,000 barrels daily. The petroleum coordinator thought 960,000 barrels daily would be enough, and this included the 96,000 barrels of "other liquids."

For the first 10 days of May prorated production averaged 1,150,000 barrels, to which should be added 96,000 barrels of unprorated production; thus the total net production for the first 10 days of the month was 1,250,000 barrels daily.

E. DeGolyer, director of conservation for OPC, appeared at the hearing to explain the transportation situation. The commission had requested Ickes to send a representative to the hearing.

In a statement DeGolyer outlined the difficulties of moving oil from Texas to the East Coast and said that the 24-inch pipe line advocated by the coordinator was absolutely essential. He indicated that he did not believe the barge movement could be made immediately effective as only 136,000 barrels daily could be transported in this manner if the entire barge capacity was diverted to this use.

Despite the fact that the barge capacity is in excess of 6,000,000 barrels, daily movement would be low, as 47 days are required to make the round trip from Texas to Pittsburgh.

DeGolyer expressed the opinion that maximum tank-car movements will be 800,000 barrels, still 520,000 barrels less than the amount needed on the East Coast. This movement contemplates the use of 60,000 cars.

He also explained that the use of second-hand pipe is going forward rapidly and he expected real progress along this line.

Commissioner Ernest O. Thompson suggested that the oil produced by individuals be purchased and stored by the federal government if it cannot be diverted to the war effort. He urged again the construction of pipe lines across Florida and barge movement by Coastal canal.

The commission called on each purchaser in Texas to supply in the record a statement of his demand for oil from each individual field. While this resulted in a material reduction in nominations, the difference was so small as to be negligible.

Ten inland refineries reported that they were unable to purchase at the market price oil sufficient to meet their needs. Members of the commission expressed the view that these plants should be served before oil should be sent to the other plants out of the fields.

The commission also gathered information concerning the exports and imports by pipe line in Texas but the results of these figures were not made public.

Kansas State-wide Hearing Set for May 21

Kansas Corporation Commission has set May 21 as the date for the market demand hearing and to fix allocations for the various fields.

Kentucky Oil Group Will Meet at Lexington

Program has been released and speakers announced for the annual mid-year meeting of the Kentucky Oil and Gas Association, Lexington, May 22. The session will open at 9:30 a.m. with a technical session, Dr. A. C. McFarlan, head of the geological department of the University of Kentucky, presiding.

One of the first papers will be presented by Dr. Louise Barton Freeman, assistant state geologist of Kentucky, on "Silurian and Devonian Stratigraphy in the Area South and East of the Western Kentucky Coal Basin." George W. Wesley, geologist for Skelly Oil Company, Evansville, Indiana, will present a discussion on "Subsurface Correlation of Chester Rocks of Southern Illinois with Western Kansas." A highlight of the morning meeting will be an address by Virgil F. Bowyer, assistant chief of the natural gas and natural gasoline division, OPC, Washington. The afternoon program includes a tour of areas surrounding Lexington, a golf tournament and fish fry.

Two addresses have been arranged for the annual dinner. Frank M. Brewster, chief of the natural gas and natural gasoline division, OPC, Washington, will speak on "The Effect of the Various War Production Board Orders on the Oil and Gas Industry and the Necessity for the Industry's Cooperation in the Promotion of the War Effort." Wirt Franklin, director of production for District 2 of OPC, will speak on "Oil Men, Keep Awake."

The session will end May 23 with an inspection tour of limestone shaft and mine of Central Rock Company, directed by Dr. A. C. McFarlan and D. J. Jones, state geologist.

South Texas Geologists, Scouts Schedule Meeting

The South Texas Geological Society and Southwest Texas Oil Scouts Association will hold their annual joint picnic and barbecue May 23 at Starke Park in Seguin. The program will include a softball tournament, Weinert Cup golf tournament and other similar events. It will be concluded with a barbecue dinner.

Humble Completes $50,000,000 Financing

Humble Oil & Refining Company has sold at par an issue of $50,000,000 serial debentures to a small group of life insurance companies, President H. C. Wiess announced last week.

The debentures will bear interest at various rates from 2.50 to 2.95 percent, and will mature in equal annual installments of $5,000,000 beginning May 1, 1953, the last maturity being May 1, 1962.

The proceeds of the issue are to be used, the announcement read, to repay $40,000,000 of short-term debt of the company and to provide $10,000,000 for capital expenditures as needed to carry out projects related to the war effort and for working capital. Upon completion of this financing, the new serial debentures will constitute the only funded debt of the company.

Standard Oil Company of Ohio last week proposed to create and sell $20,000,000 of new long bonds. Proceeds would be used to retire $8,000,000 principal amount of currently outstanding long-term indebtedness, to provide the company with funds for construction of additional refining facilities—estimated at $7,000,000—and to provide additional capital funds required by changing conditions under which it is operating, a company announcement said.

William L. Valentine Dies in Los Angeles

William L. Valentine, 72, founder of Fullerton Oil Company, died at Los Angeles, May 9. He had been in ill health for the past two years but continued an active interest in his company as well as many civic, charitable and fraternal activities.

He began his career in oil in 1899 with development of extensive producing properties in the Olinda area of Orange County. In 1900 he merged Fullerton Oil Company, a California corporation, with the Fullerton Oil Company, an Arizona corporation, with John J. Fay, Jr., as president. Valentine served as secretary of the company until Fay's death in 1918, when he assumed the presidency.

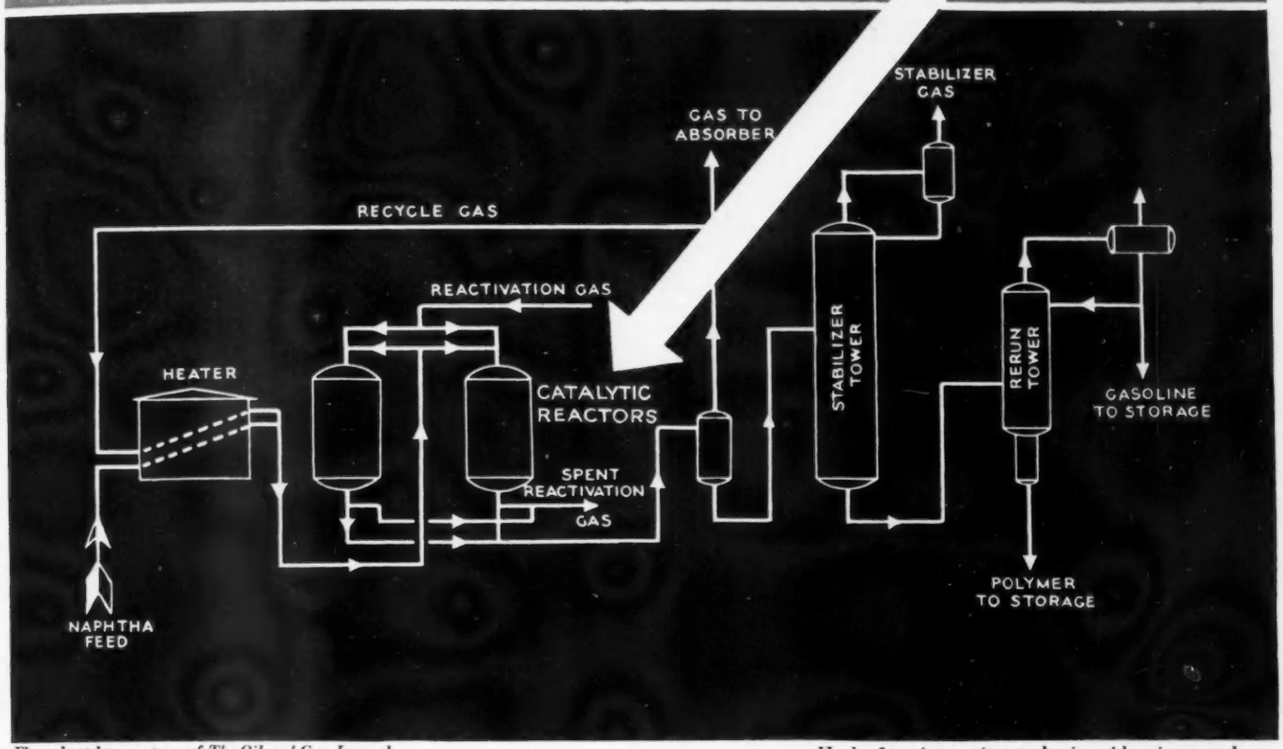
In 1912, the company discovered Grass Creek field, Wyoming. Properties were acquired later in New Mexico and in March, 1942, his company discovered the Fullerton pool in Andrews County, West Texas, extending the company's operations into four states.

Valentine was born at Noyo, Mendocino County, California, on March 8, 1870. He started his business career in San Francisco with Easton Eldridge & Company, a real estate firm, and in 1893 moved to Los Angeles to manage the firm's activities in this area. He became a director of the Security-First National Bank of Los Angeles in 1912 and served continuously thereafter. From 1925 to 1929 he served as a director of the Los Angeles Branch of the Federal Reserve Bank of San Francisco, and was board chairman from 1926 to 1929.

Valentine was a member, and served as vice president of the Society of

WILLIAM L. VALENTINE

ALUMINAS AT WORK HERE



Flow-chart by courtesy of *The Oil and Gas Journal*

Hydroforming unit employing Alumina catalysts

Aluminas are employed in the large-scale synthesis of high octane gasoline, so vital today for combat equipment. They serve in three ways: as catalysts, as carriers, and as auxiliary catalysts. They help to increase the yield, improve products, and reduce costs.

The physical properties of the Aluminas suit them for long use with a minimum loss of productive capacity in numerous catalytic applications. Their greater surface area increases the efficiency of the catalysts. When active catalysts are mounted on Alumina carriers, it is frequently possible to operate at lower temperatures.

Aluminas suitable for catalytic purposes are of two types. Activated Aluminas and the Hydrated Aluminas C-700 are catalytically active, and may be used alone or as catalyst supports. The inactive types are Tabular Alumina and Monohydrated Alumina D-50.

Whether you're building up or tearing down, Aluminas may give your catalytic reactions a boost. ALUMINUM COMPANY OF AMERICA (*Sales Agent for* ALUMINUM ORE COMPANY) 1962 Gulf Building, Pittsburgh, Pennsylvania

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ALUMINUM ORE COMPANY

ALUMINUM AND FLUORINE COMPOUNDS

California Pioneers; director of the California Institute Associates of the California Institute of Technology; member of the Pioneer Petroleum Society of California; and served as chairman of the board of the California Community Foundation.

Flood Halts Work In Colombian Field

Floodwaters from the Magdalena River covered properties of Shell Oil Company of Colombia where the company has been testing its Casabe 3 producer on the Yondo concession, according to a dispatch last week from Barranca Bermeja. The river covered a large portion of the national highway, destroyed homes of workers and damaged machinery in the region.

Colombian Petroleum Company has spudded Tres Bocas 3 at 2 miles east of No. 1, a small producer on the Barco, and continues testing No. 2-A, another and larger producer. These wells are about 12 miles south of Socuavo 2, which is drilling below 3000 feet.

Venezuela Replaces Russia in Second Place

Venezuela topped Russia in crude production during 1941, thus becoming second oil producing nation in the world, according to the annual report issued by the Venezuelan Ministry of Development. The official figures show Venezuelan production at 33,342,000 metric tons (236,728,000 barrels*) as compared with Russian output of 32,900,000 metric tons. The major share of Venezuelan production came from the older fields of the western area, although late in the year the eastern fields began to gain. Of the 436 new wells completed in 1941, over half were in the east. Producers for the entire country totaled 408. Production by various companies during 1940 and 1941 is shown below:

Company	1940 Barrels	1941 Barrels	Percent Gain
Lago Petroleum	55,344,000	78,995,000	42.7
Venezuelan Oil Concessions ..	47,144,000	52,632,000	11.6
Mene Grande Oil	40,136,000	47,535,000	18.4
Standard Oil of Venezuela	33,555,000	36,728,000	9.4
Caribbean Petroleum ...	11,396,000	13,199,000	15.8
Colon Development .	6,042,000	6,497,000	7.5
Central Area Exploitation .	667,000	575,000	—13.7
British Controlled Oilfields	298,000	227,000	—23.8
Compania de Petroleo Lago	199,000	213,000	7.0
Socony-Vacuum Oil	14,000	99,000	607.1
The Texas Co. (Venezuela) ..	14,000	28,000	100.0
	194,809,000	236,728,000	21.5

Ninety-five percent of Venezuelan crude last year was exported to the refineries at Aruba and Curacao and to the United States. Exports were listed as follows:

Destination	Barrels
Aruba	84,934,822
Curacao	69,941,732
United States	39,567,043
Canada	4,912,604
United Kingdom	2,151,783
Spain	1,406,262
Argentina	792,459
Uruguay	588,504
British West Indies	197,962
Union of South Africa	60,122
Cuba	34,605
	204,587,898

*Conversion Factor: Metric ton = 7.1 barrels.

OIL FIELD SCRAP AND SALVAGE

Shell Goes "All Out" To "Get in the Scrap"

SHELL Oil Company and its affiliates have gone all-out on a scrap reclamation program which shows that patriotic effort is more potent than financial considerations. "Routine scrap disposal," says the company, "has always been the policy, and the men in charge of the intensified scrapping program felt they would find the fields, tool houses and gas plants practically cleaned up before the new campaign started. However, employes were informed of the scrap shortage and were asked to be on the lookout for additional scrap in the course of their regular duties. Results were immediate. What strict financial considerations had failed to accomplish in peacetime developed overnight as men realized the need for scrap to win the war."

In the first quarter of this year, Shell sales divisions marketed 410 tons of scrap. Production, pipe-line and refining groups marketed 2515 tons. Collection and disposal of scrap continues steadily. Shell officials are convinced that the oil industry can be made to yield, with proper pressure, a surprisingly great tonnage of scrap materials. "We find that a general disregard for old metal has created a vast, almost untapped reserve of scrap which, ton for ton, is twice as valuable in steel production as iron ore itself."

In the drive for scrap, which got under way early this year, area department managers got together with employes and developed a general promotional program. The idea of scrap collection was dramatized through a series of cartoons showing the full significance of the program. A progress chart was designed. On this chart stamps were placed to show how collections were progressing, and to make the figures more vivid, the data were expressed in terms of 12-ton and 28-ton tanks which could be produced with the scrap collected. One production manager emphasized the need to gather even small quantities by stating, "Clean your district. It would have to be a very small piece of scrap to be too small to make a bullet."

Shell employes at once responded. Hit-or-miss methods became a thing of the past. Men going their rounds in the field carried buckets and brought them in filled with bits of rusty metal hitherto unnoticed. Some used their own cars to collect pieces of metal too heavy to carry from the field. An old custom was broken when stones were substituted for scrap metal used as weights in the counterbalance boxes at wells. Several hundred tons of steel is expected yet to be taken from such boxes in Shell's Mid-Continent area. Workers directed the question "What is it good for?" toward idle equipment. Obsolete machinery, such as bull wheels, was collected, reclaimed where advisable and otherwise junked and marketed. Miles of pipe have been unearthed and reclaimed to avoid purchase of new pipe.

Shell officials in charge of the scrap program, which is centered upon the collection of metals, insist that the materials they sell to dealers shall not be stored but shall go directly to the steel mills. Nothing is sold that is considered to be reclaimable. Dealers are required to cut up any doubtful pieces before hauling them away.

Henderson to License All Junk Dealers

ALL dealers selling waste, scrap or salvage material to industrial consumers will be licensed, Price Administrator Leon Henderson announced last week.

The licensing order, Supplementary Order No. 5, becomes effective May 20, 1942, and requires registration by the dealers on or before June 20, 1942.

The order covers dealers selling to industrial consumers waste, scrap or salvage material for which maximum prices are established by 14 price schedules and regulations issued by the Office of Price Administration. Furthermore, the necessary licensing was extended in the case of iron and steel scrap to a dealer selling to a consumer or to a consumer's broker.

"Any dealer violating the price schedules or regulations covering such waste or scrap materials," the Price Administrator warned, "may have his license suspended, as provided in the Price Control Act. He thereby will lose his privilege to do business. Activity after suspension of a license would violate the Price Control Act and would subject the offender to civil and criminal prosecution."

NGAA Reelects Officers At Meeting in Tulsa

Tank-car movement of 1,000,000 barrels daily of crude and products was indicated as possible by C. R. Musgrave, before the Natural Gasoline Association of America, meeting at Tulsa, May 13-15. This step-up would be accomplished by diverting 30 percent of tank cars now in other districts to serving the East Coast, plus the effect of 7500 additional tank cars through more efficient use of the tank car fleet. Musgrave, vice president of Phillips Petroleum Company, is chairman of District 2 subcommittee on tank cars and trucks of OPC.

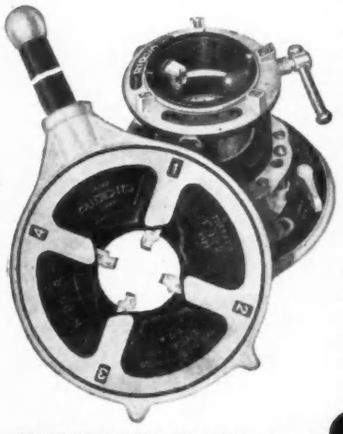
An indication that the priorities system of providing equipment for field development and plant construction would be supplanted by an allocation system by July 1 was given by Justin Wolfe, attorney, natural gas and natural gasoline division of OPC. Wolfe dealt at length with the equipment situation and predicted that materials will become more difficult to get as the war program progresses.

Officials reelected are Ray E. Miller, Hanlon-Buchanan, Inc., president; H. H. Beeson, Sabine Valley Gasoline Company, Shreveport; H. A. Eells, Cities Service Company, Bartlesville; J. R. Jarvis, Lone Star Gasoline Company, Dallas, and J. W. Vaiden, Skelly Oil Company, Tulsa, vice presidents. C. R. Williams, Chicago Corporation, Corpus Christi, was elected a vice president to represent the new high-pressure gas division.

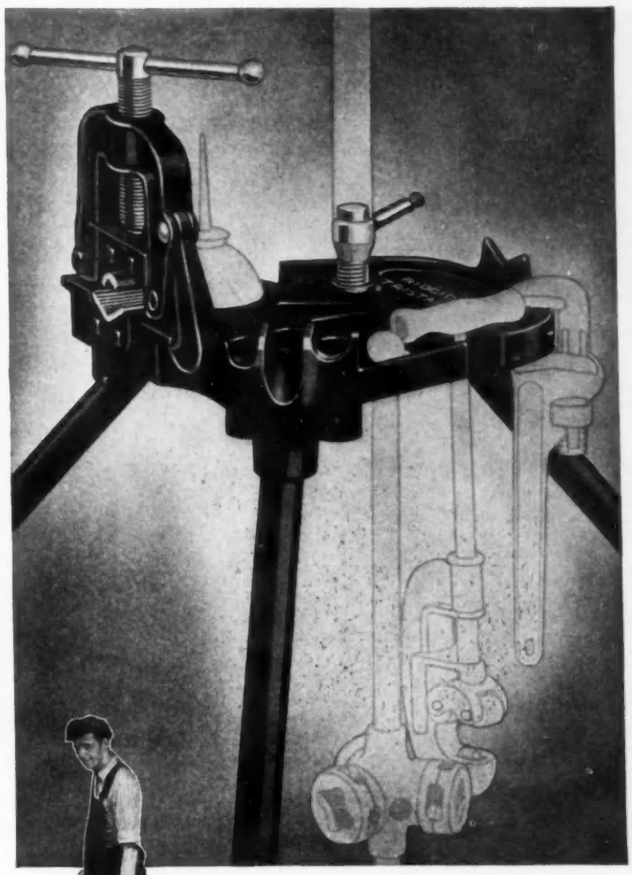
This Quicker Pipe Threading Also Speeds The Victory!

You set this RIDGID No. 65R to size in only 10 seconds . . .

It's a time-beater, a work-saver. It threads 1" to 2" pipe, 4 sizes, with 1 set of clean-cutting high speed steel chasers — no extra dies to lug around or fool with. You change size in a few seconds: screw up workholder, move setting post, screw it down again.



Speedy mistake-proof workholder sets instantly, one screw to tighten and *no bushings.* Any thread variations, any pipe — and it's made of rugged steel and malleable with drop-forged hardened steel cam plates. . . . It licks delays and waste of priceless time — ask to see it at your Supply House.



RIDGID Tri-Stand Vise

An Efficient Workbench wherever you need it

It's a war against time — make minutes count more, with this handy RIDGID Tri-Stand. Take it easily to the job — the fold-up legs quickly set up again and you have a complete workbench, plenty of room for oil cans, dope pots and slots for tools, a pipe rest and 3 benders that won't collapse pipe. Chain or yoke vise; yoke type has LonGrip jaws to protect nickel pipe. Screw down feet and ceiling brace if you want them — but it's well balanced so you don't have to baby it, and that goes for its rugged construction, too! *See it at your Supply House.*

All RIDGID Pipe Tools are sold through Supply Houses

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THE RIDGE TOOL COMPANY
ELYRIA, OHIO, U.S.A.

Pipe Wrenches, Cutters, Threaders, Vises

Work-Saver Tools for America's Big Job in 1942

Refinery Runs at New Low; Stocks Again Reflect War

Former difficulties were extended over the latest week covered by the industry's statistics, that is the seven days ended May 9, the figures having revealed a further curtailment of refinery runs to another new low since early 1940, while crude-oil accumulated in storage in Texas, and the East Coast could obtain only subnormal supplies.

There was a little success in stepping up supplies of heavy-fuel oil where needed, as evidenced by a 216,000-barrel addition to the nation's stocks of that urgently needed product.

But the 309,000-barrel increase in stocks of light-fuel oil was not particularly gratifying, as the addition was subnormal for this season and stocks of that product now are 3,337,000 barrels (10 percent) smaller than a year ago. A serious shortage of heating oil on the East Coast next fall and winter may be unavoidable, particularly in view of the fact that it has been necessary to divert some of the light-fuel oils into supplying the pressing needs for residual fuel oil, a course which has raised the average gravity of residual.

Crude-oil production has held up at comparatively high levels, but only through overproduction in Texas. That state added over 1½ million barrels of crude to storage in the week ended May 2, and an even larger addition was indicated for the week of May 9, when production was substantially higher. The nation's production of 3,756,000 barrels daily in the May 9 week was about 70,000 barrels above the average recommended for May by the petroleum coordinator, although it was 212,000 barrels (5.6 percent) under output a year earlier.

Crude runs to stills in the United States averaged 3,406,000 barrels daily in the week ended May 9, a new low for the year and down 35,000 barrels from the preceding week's rate. Those runs were 470,000 barrels a day, or 12 percent, lower than the throughput of 3,876,000 barrels daily a year previously. As compared with the new operating rate of 3,406,000 barrels daily, equivalent to only 72.7 percent of capacity, the lowest level of refinery runs last year was 3,490,000 barrels per day, reached in mid-January.

A further decrease in current supplies of products for the East Coast district was indicated by an additional curtailment of 43,000 barrels in daily refinery runs in that area and the districts of the Southwest from which it normally draws a large part of supplies. Plants in the two major regions together processed 1,506,000 barrels of crude daily, having operated at 63.2 percent of rated capacity. Slight curtailment of runs occurred also in the Appalachian, Rocky Mountain, and California districts. In the Middle West and upper Mid-Continent, plants charged to stills a little more crude than in the previous week and utilized 85 to 90 percent of capacity, as those areas helped to supply the East through rail shipments.

The East Coast and Southwest together drew on gasoline stocks to the extent of 30,000 barrels daily, but left storage of light-fuel oil unchanged, and added 50,000 barrels daily to stocks of residual fuel oil.

For the nation as a whole, there was a 726,000-barrel withdrawal of finished and unfinished gasoline from storage during the week, about the same withdrawal as that in the corresponding week last year. Left on hand at the end of the week, however, was a total of 100,650,000 barrels, or 5,500,000 barrels (5.7 percent) more than a year earlier. The stocks are not only larger than a year ago, in the face of smaller demand, but they also are much less favorably distributed, being excessive in the refining districts and short in the consuming districts.

The national inventory of gas oil and distillate fuel was increased from 29,638,000 to 29,947,000 barrels in the week ended May 9, but the latter amount was 3,337,000 barrels (10 percent) less than the 33,284,000 barrels on hand May 9 last year. The Middle West added about 200,000 barrels to storage during the week, but there was no improvement in the inventory available to East Coast consumers and the supplies actually within the area possibly were reduced, as stocks there and in the Southwest together showed no change.

The United States inventory of residual fuel oil was increased 216,000 barrels between May 2 and May 9, having risen to 80,155,000 barrels. However, the latter quantity was 12,000,000 barrels (13 percent) smaller than that on hand a year earlier.

While the East Coast and the Southwestern supplying districts together showed a 346,000-barrel addition to stocks of the heavy-fuel oil, that lump figure gave no indication whether or not the East Coast district itself continued to draw on its seriously limited stocks. However, there was reported a withdrawal of 184,000 barrels from stocks in California, while the Rocky Mountain district took out 73,000 barrels probably in supplementing California's supply, while Oklahoma-Kansas withdrew 65,000 barrels as that area aided in supplying the East. In the Middle West and the Appalachian districts, there were additions to storage in the amounts of 169,000 and 23,000 barrels, respectively.

Crude Oil Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

STATE OR DISTRICT	[1]OPC Allocation in May	PRODUCTION IN WEEK ENDED May 9	May 16
Arkansas	74,000	73,550	71,050
California	673,800	646,100	648,800
Long Beach		37,000	36,600
Midway-Sunset		59,100	55,900
Kettleman Hills		32,600	35,400
Wilmington		98,500	93,400
Rest of State		418,900	427,500
Colorado	7,900	7,560	7,500
Illinois	329,200	314,800	278,300
Salem		46,850	43,150
Louden		51,900	49,000
Other New Pools		204,050	174,500
Old Pools		12,000	11,650
Indiana	17,900	20,900	23,600
Kansas	259,300	242,950	261,750
Kentucky	12,800	12,600	12,350
Louisiana	298,600	310,700	302,000
North Louisiana		81,900	81,800
South Louisiana		228,800	220,200
Michigan	60,500	63,200	64,150
Mississippi	48,100	90,600	88,100
Missouri		130	130
Montana	25,200	21,600	21,700
Nebraska	4,500	3,800	3,700
New Mexico	73,300	71,400	71,500
New York	14,800	13,850	12,750
Ohio	10,200	9,900	9,750
Oklahoma	438,500	398,950	388,000
Oklahoma City		78,500	72,800
Seminole Area		104,100	102,800
Rest of State		216,350	212,400
Pennsylvania	50,500	56,850	52,250
Tennessee		30	30
Texas	[2]960,000	1,078,400	1,071,100
Upper Gulf Coast		230,200	219,200
East Texas Field		226,300	226,400
Rest of Eastern Texas		79,500	79,100
Lower Gulf Coast		65,600	65,200
Southwest Texas		45,800	50,400
South Central Texas		16,500	19,500
West Texas		186,500	191,300
North Texas		145,400	148,500
Panhandle		82,600	80,500
Utah		15	15
West Virginia	17,100	9,950	9,950
Wyoming	98,300	92,830	92,800
Total United States	3,474,500	3,540,665	3,491,275

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirement for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC allocations. (Details on state allowables published in The Oil Weekly of May 11, page 46.)

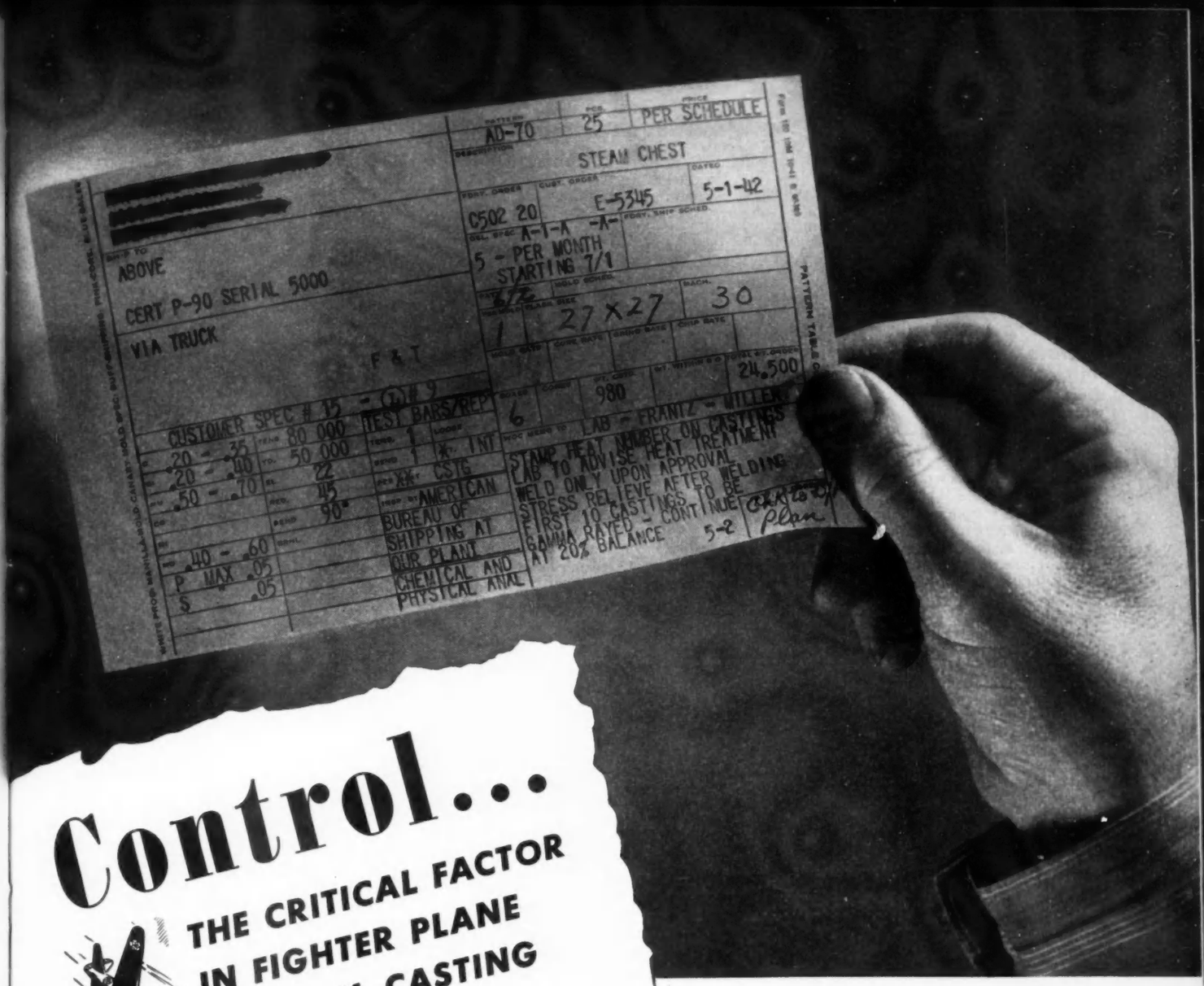
[2] Net daily average allowable production of crude oil and and other petroleum liquids as of April 1, was 1,132,512 barrels daily, and Texas Railroad Commission extended April Allowables through first 15 days of May pending hearing held on May 11. Allowable as of May 1, actually is slightly above this figure for April 1, due to subsequent completions of some new wells. Under May 1-15 order, most Texas fields were shutdown May 2, 3, 4, 8, 9, 10, 11, 14, and 15, unless included among exempt fields which, because of peculiar conditions, are allowed to produce every day. Because of producing oil for war purposes, shutdown days for Panhandle, North Texas and District 7-B in West Central Texas were limited to May 3, 9, 10, 11, and 15.

Markets Generally Firm; Surplus Gasoline on Gulf

Markets last week remained generally strong in all districts except the Gulf Coast, and even in the latter area, there was good demand for most products except gasoline, of which there was a material surplus.

On East Coast, initial effects of card rationing of gasoline could be seen, as the new restrictions became effective throughout 12 states and the District of Columbia and in eastern portions of 5 other states on Friday, May 15, after 3 days of registering of motorists. Cars engaged in non-essential use are allowed 2 gallons a week, and those used in carrying civilians to work are allowed about 3 to 5½ gallons a week. The permanent rationing system to become effective July 1 will take into consideration the size of the engine in each car, whereas the present temporary system does not.

Light fuel oil and kerosine were in good demand throughout the East, with



Control...

THE CRITICAL FACTOR IN FIGHTER PLANE OR STEEL CASTING

THOUSANDS of horsepower speed the fighter plane to combat . . . batteries of machine guns and cannon aim it for the kill . . . yet powerful motors and heavy armament cannot win a single "dog-fight" unless *control* instruments function perfectly.

This simple principle of control as the critical factor governs all operations at Lebanon—beginning with the writing of shop orders. These orders are not treated as routine detail. They are made into comprehensive "working plans" through which each department in the plant gains a thorough understanding of the customer's requirements.

Lebanon shop orders cover chemical and physical specifications . . . heat treatment . . . pattern equipment . . . delivery requirements . . . inspection—both by customer's representatives and by Gamma and X-Ray . . . sample castings for dimensional checking by customer or foundry . . . customer's requests for test blocks or coupons as well as all specific customer instructions . . . preference ratings . . . estimated or actual casting weights. These orders replace chance with *control.*

Control . . . and control again . . . control wherever possible . . . that is the premium Lebanon pays for the exceptional integrity, soundness and quality of Circle Ⓛ Castings . . . the castings which safeguard such reputations as those of Westinghouse and Jones & Lamson.

Lebanon metallurgists are studying future applications for alloy and carbon steel castings of controlled quality . . . and are ready to discuss significant developments with forward looking organizations.

LEBANON STEEL FOUNDRY · LEBANON, PENNA.

ORIGINAL AMERICAN LICENSEE GEORGE FISCHER (SWISS CHAMOTTE) METHOD

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CIRCLE L

supplies scarce, despite the fact that the heating season was over, as jobbers sought to build up storage for next fall's requirements.

Mid-Continent refiners reported steady demand for virtually all refined products, with Eastern buyers continuing to take comparatively large quantities, while there was also substantial demand from Mid-Western jobbers. Lubricants were in particularly strong demand.

Peak Production in Kansas; Illinois-Mississippi Down

United States crude oil production averaged 3,491,275 barrels daily in the week ended May 16. It was 49,390 barrels under the daily average of the previous week but exceeded by 16,775 barrels the production rate recommended for May by the petroleum coordinator.

Largely responsible for the week's decrease was a sharp drop in Illinois production, which averaged 278,300 barrels daily, against 314,800 per day the week before. Miscellaneous new pools largely accounted for the decline, although Salem and Louden also were off somewhat.

Decreases occurred also in Arkansas, Louisiana, Mississippi, Oklahoma, and Texas, with the Mississippi decline of particular significance, as that state apparently has hit its peak, under unrestricted production, and is on the way down. Output averaged 88,100 barrels daily, compared with 90,600 the previous week. Mississippi's producing ability began to falter as early as April, when daily production per well began to decline, although total output at that time still was rising.

In contrast with the natural declines in Illinois and Mississippi, production rose to a new all-time peak in Kansas in averaging 261,750 barrels daily in the week ended May 16. In the preceding week, output had averaged 242,950 barrels a day.

May Move Permian Basin Oil West in Arizona Gas Line

Producers in West Texas and New Mexico may take some heart in the report that there is a possibility that oil from that area may be moved to a new market on the West Coast.

Demand for fuel oil on the West Coast is so heavy that California production needs supplementing and a plan is under consideration by which a gas system which runs from West Texas and New Mexico to a point west of Tucson, Arizona, may be put into oil usage. The line could either be extended beyond its present western terminus or oil could be moved from that terminus into California or such other point as might be determined by tank cars.

There is a possibility that more than the present gas interests might look into this matter with the view of taking up comparatively inactive lines from the New Mexico-West Texas area to the Gulf and relaying them westward.

Keystone Reverses Products Line as Crude Carrier

The first pipe line in the northeast to reverse its flow and change over from a products line to a crude carrier in order to help alleviate the oil shortage on the Eastern seaboard has been put back in operation by Keystone Pipe Line Company, subsidiary of The Atlantic Refining Company.

The 280-mile line normally delivered refined products from the Atlantic refinery at Point Breeze, Pennsylvania, to Pittsburgh, but under the new operation the 8-inch line will deliver approximately 20,000 barrels of crude daily from Pittsburgh to Point Breeze. The line as a products carrier westward was normally 25,000 barrels daily.

Before the transformation could be completed, four pump stations were reworked and two new ones were built. The new pump units are at Pittsburgh and Vinco near Johnstown. All stations have centrifugal pumps with 660-hp. electrical motors. The line, running across mountains, has a rise of about 1800 feet, elevation at Pittsburgh station being 600 feet while the highest point along the route is around 2420 feet.

The transformation required installation of unloading racks and storage facilities at Pittsburgh to which point crude is moved from oil fields in the Mid-Continent and Southwest.

The Susquehanna Pipe Line, which is owned by Sun Oil Company, and which formerly moved gasoline from Philadelphia eastward, has been reversed, and now is moving gasoline from west to east. However, the west-east flow is less than 50 percent of that which was maintained in the east-west operation, due to need of additional booster stations. Plans are under way for the installation of the stations.

Sinclair Prairie Buys Interest in East Texas Line

Sinclair Prairie Oil Company has purchased a half interest and operating control of the Delta Drilling Company's properties in the Chapel Hill field in East Texas for $300,000. The deal involves lease on 1500 acres, with an oil well in Pettit and a Paluxy distillate well that has been producing 10,000 to 12,000 barrels monthly, and a 14-mile 6-inch gas line that delivers Chapel Hill gas to the Kilgore sector of East Texas. The gas line will be tied into Sinclair Prairie's system in south portion of the East Texas field, enabling it to serve all its leases and at same time produce its Chapel Hill distillate wells.

API and SAE Form Cooperative Research Unit

A new coordinating organization, the Cooperative Research Council, has been established by the American Petroleum Institute and the Society of Automotive Engineers. Its purpose is to centralize, correlate and promote cooperative research work of the automotive, aeronautic and petroleum industries, with the aim of developing the best combinations of fuels, lubricants and equipment powered by internal combustion engines. Headquarters of the council is Room 1618, 30 Rockefeller Plaza, New York.

Officers of the council include: B. B. Bachman, Autocar Company, chairman; T. G. Delbridge, The Atlantic Refining Company, vice chairman; C. B. Veal, SAE, secretary, and R. P. Anderson, API, treasurer.

Council members, who are appointed for one year, are: Bachman; J. M. Crawford, Chevrolet Division, General Motors Corporation; William Littlewood, American Airlines; J. B. Macauley, Jr., Chrysler Corporation; Arthur Nutt, Wright Aeronautical Corporation; C. G. A. Rosen, Caterpillar Tractor Company; D. P. Barnard, Standard Oil Company (Indiana); A. L. Clayden, Sun Oil Company; Delbridge; R. A. Halloran, Standard Oil Company of California; K. G. Mackenzie, The Texas Company; G. G. Oberfell, Phillips Petroleum Company.

Present organization under the council consists of Cooperative Fuel Research Committee, Cooperative Lubricants Research Committee, Cooperative Equipment Research Committee, and War Advisory Committee.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

ITEM	Crude Oil Prod.		Runs to Stills		Crude Stocks		Gasoline Stocks		Gas Oil & Distillate Stocks		Residual Fuel Oil Stocks	
	Bbls. Day (Add 000)	Week Ended	Bbls. Day (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-2	[1]4,120	10-18	266,187	3-29	99,727	3-29	[5]54,983	11-15	102,448	1- 4
1942	[1]4,337	2- 7	3,961	1- 3	263,208	3-28	[1]107,229	3-14	49,357	1- 3	95,857	1- 3
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-21	71,152	10- 7	20,722	4-15	105,397	4- 8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	80,870	10- 4	28,381	4-12	92,635	7- 5
1942	3,418	5- 2	3,406	5- 9	244,364	1-10	92,987	1- 3	29,240	4-25	79,939	4-25
Trends in 1942 (Week Ended):												
Jan. 3	4,038	.....	3,961	.....	244,440	.....	92,087	.....	49,357	.....	95,857	.....
Jan. 31	3,871	.....	3,848	.....	250,740	.....	97,810	.....	40,674	.....	91,189	.....
Feb. 28	4,016	.....	3,675	.....	259,373	.....	105,635	.....	34,547	.....	88,285	.....
Mar. 28	3,820	.....	3,667	.....	263,208	.....	105,624	.....	31,756	.....	83,045	.....
April 4	3,418	.....	3,515	.....	261,768	.....	105,149	.....	31,231	.....	82,455	.....
April 11	3,543	.....	3,518	.....	258,442	.....	104,580	.....	30,602	.....	82,526	.....
April 18	3,545	.....	3,548	.....	257,563	.....	103,502	.....	29,929	.....	82,577	.....
April 25	3,581	.....	3,506	.....	257,073	.....	102,597	.....	29,240	.....	81,107	.....
May 2	3,335	.....	3,441	.....	259,145	.....	101,376	.....	29,638	.....	79,939	.....
May 9, 1942	3,544	.....	3,406	.....	.....	.....	100,650	.....	29,947	.....	80,155	.....
May 9, 1941	3,756	.....	3,876	.....	[4]265,728	.....	95,150	.....	33,284	.....	92,156	.....
Change:												
In week	+209	.....	—35	.....	+2,072	.....	—726	.....	+309	.....	+216	.....
In year	—212	.....	—470	.....	—6,583	.....	+5,500	.....	—3,337	.....	—12,001	.....
In year	—5.6%	.....	—12.1%	.....	—2.4%	.....	+5.7%	.....	—10.0%	.....	—13.0%	.....

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Stocks, May 3, 1941.

U. S. Field Operations

Illinois

Wayne County Wildcat Best for the Year

Wayne County wildcat flows 898 bbls in 12 hrs. Activity increasing in new Clinton County field. Well in new Wayne County field flows and swabs 1168 bbls; Gallatin County discovery completed for 110 bbls.

Wayne County: Texas Co.'s Mayberry 1, C W½ NW SE 7-3s-6e, 5 miles south of Wayne City and 5 miles from other substantial production, flowed 898 bbls in 12 hrs through open casing, natural, from McClosky at 3333-48 ft. Appears to be biggest discovery well of past year and also one of largest producers drilled anywhere in Illinois during 1942.

Bell Brothers' Stull 1, C SE SE 18-1s-5e, southeast offset to discovery well of new Coil field, flowed and swabbed 1168 bbls in 24 hrs from Aux Vases at 2920-40 ft, natural, to revive interest in area.

Madison County: M. D. Bryant's Myer 1, C W½ NE SE 16-3n-6w, has set casing on Trenton at 2344-53 ft which yielded 150 ft oil, 90 ft oil-cut mud, on hour's drill stem. Is first successful wildcat on extreme west side of basin this year and one of most promising yet drilled there.

Gallatin County: R. Bruce Martin's L. Bahl 1, SE SE NW 15-8s-9e, discovery 5 miles west of Inman field, pumped 110 bbls in 24 hrs, natural, from Cypress at 2482-97 ft.

Clinton County: In the new Boulder field of the Kaskaskia River Bottoms activity is rapidly increasing following completion of E. Frank Jones' Harrison 1, NE SE SW 2-2n-2w, with initial of 265 bbls natural, in 22 hrs from Benoist at 1210-19 ft; field's second oil well, Texas' Gray Community 2, SW NW SE 35-3n-2w, swabbed 116 bbls natural in 18 hrs from Benoist 1203-08 ft; Texas has four other operations, Gulf one and Murphy-Goldsmith one. First well was Texas Gray 1, completed in Devonian a year ago as a gas well which never has been produced. Area is one of most difficult in Iillinois to drill because of water now waist deep in some sections of field.

COMPLETIONS

Clark County: Wildcat—T. C. McDaniel's Howard 1, sw nw sw 36-10n-14w, abnd 535 ft.

Clay County—Gulf's Drake 1, 18 ft e of sw nw 36-4n-7e, abnd 2656 ft.

Texas Co.'s Landwehr 1, nw sw ne 8-5n-7e, Well. 2487-2510 ft, 195 bbls, 2924 ft.

Clay County: Wildcat—J. W. Sanders et al's Bissey 1, c s½ ne nw 2-2n-7e, abnd 3140 ft.

Clay County: Wildcat—L. H. Cupps' Frost 1, c e½ se se 9-3n-6e, abnd 3141 ft.

Crawford County: Wildcat—T. H. Hicks et al's Cattrell Comm. 1, c nw se 23-5n-14w, abnd 2853 ft.

Cumberland County: Wildcat—A. Leatherman's Shores 1, nw sw nw 31-10n-11e, abnd 1050 ft.

Edwards County—Magnolia's Koertge 1, c n½ ne ne 6-1n-14w, Rosi. 3124-27 ft, 224 bbls, 3200 ft.

Tide Water's Gawthrop 3, 75 ft s of c w½ se nw 18-1s-11e, McC. 3198-3204 ft, 505 bbls, 3208 ft.

Edwards County: Wildcat—Zephyr Drlg.'s Shelby 1, c e½ nw sw 27-1n-10e, abnd 3379½ ft.

Fayette County: Wildcat—Bawton Test's McNally 1, sw nw sw sw 19-5n-4e, abnd 1110 ft.

Results on Industry's Prospecting Fronts

Of 72 wildcats reported completed during the week, 13 were oil producers. This makes total of 1060 completed in 1942, of which 123 produced oil and 6 distillate.

California: Kern heavy oil strike confirmed.

Rocky Mountains: Number of wildcats starting.

Texas Gulf Coast: Wildcat work increasing; Grimes test shows.

Illinois: Wayne County wildcat is best for year.

Fayette County: Wildcat—Turner Drlg.'s Williams 1, nw sw sw nw 6-6n-2e, abnd 1921 ft.

Gallatin County: Wildcat—Jarvis Bros.' Drone 1, nw-nw nw 8-9s-10e, abnd 2903 ft.

Hamilton County—B. S. Ring's Craddock 2, se se nw 22-6s-5e, abnd 3220 ft.

Texas Co.'s Hall "B" 1, nw nw nw 17-6s-7e, A. V. 3005-12 ft, 3019-25 ft, 684 bbls, 3032 ft.

Hamilton County: Wildcat—C. N. Krysl's McGrary 1, 60 ft e of ne se se 2-4s-5w, abnd 1205 ft.

Hamilton County—Magnolia's Fyie 1, c se se 25-3s-7e, A. V. 3214-48 ft, 30 bbls, 3248 ft.

Rockhill Oil Co.'s Gray M-3, se ne sw 30-3s-8e, A. V. 3208-12 ft, 15 bbls, 3216 ft.

Magnolia's Betts-Barker 1, c sw sw 11-6s-6e, L. O'H. 3153-63 ft, 32 bbls, 3160 ft.

Hamilton County: Wildcat—Pure's Johnson 1, c nw ne 3-7s-6e, abnd 3297 ft.

Jasper County—Lain Oil & Gas Co.'s Burton 3, c sw sw 5-5n-14w, McC. 2832-38 ft, 200 bbls, 2882 ft.

Jasper County—Simon Lebow's Zuber 1, c e½ se se 6-5n-14w, McC. 2835-63 ft, 447 bbls, 2866 ft.

Pure's Hall 1, c e½ sw ne 7-5n-10e, McC. 2836-41 ft, 407 bbls, 2873 ft.

Jasper County: Wildcat—Sinclair-Wyoming's Birch 1, se ne ne 18-5n-8e, abnd 3056 ft.

Jefferson County: Wildcat—Deaton & Bears et al's Howard 1, ne ne nw 5-1s-3e, McC. 2621-2627 ft, 192 bbls, 2627 ft.

Jefferson County: Wildcat—Kingwood's J. F. P. Co. 1, ne ne sw 29-3s-2e, abnd 2788 ft.

Magnolia's Lange 1, se ne ne 34-2s-1e, Beth. 1985-2007 ft, 36 bbls, 2015 ft.

Marion County: Wildcat—W. O. Morgan's Doolen 1, c ne se 5-4n-1e, abnd 1603 ft.

Marion County—Louis Lilly's Bell 1, ne ne se 17-1n-1e, abnd 1825 ft.

Perry County—Magnolia's Majwski 1, c sw ne 22-4s-1w, Well. 1116-39 ft, 12 bbls, 1139 ft.

Richland County—Pure Oil Co.'s Coen 22, c se se 4-3n-9e, Well. 2586-90 ft, 307 bbls, 2590 ft.

Wabash County—Trans-Tex's Mussett 1-C, sw sw nw 29-2s-13w, Cyp. 2449-66 ft, 130 bbls, 2469 ft.

W. W. Gray's Fee A-24, sw sw se 14-3s-14w, Beth. 2636-45 ft, 225 bbls, 2645 ft.

S. W. Petrie's Trimble Hrs. 2, se ne sw se 35-2n-12w, Beth. 1964-81 ft, 45 bbls, 1989 ft.

Washington County: Wildcat—Shell's Mill 1, se sw sw 31-2s-1w, abnd 1769 ft.

Wayne County—First Nat'l. Pet.'s Ellis Comm. A-1, 42 ft n of sw ne 18-1s-5e, A. V. 2960 ft, 69 bbls, 2980 ft.

Gulf-Texas' Shaw 1, nw sw nw ne 33-1s-6e, A. V. 3025-37 ft, McC. 3160-66 ft, 46 bbls, 3170 ft.

New Penn Dev. Corp.'s Harris 1, c w½ se ne 28-2s-9e, abnd 3436 ft.

Wayne County: Wildcat—New Penn Dev. Corp.'s Fisher 1, c w½ nw nw 27-2s-9e, abnd 3398 ft.

Wayne County—C. F. Frazier et al's Thomas 1, c w½ ne nw 27-1s-6e, McC. 3188-94 ft, 3198-3208 ft, 1160 bbls, 3273 ft.

Texas Co.'s Johnson 1, c w½ nw sw 27-1s-6e, A. V. 3031-48 ft, 90 bbls, 3178 ft.

Watkins & Weinert's Kincaid 3, c e½ ne sw 36-1s-7e, McC. 3327-3334 ft, 350 bbls, 3336 ft.

Pure's Kays 1, 145 ft w of c nw sw 1-2s-7e, McC. 3317-21 ft, 188 bbls, 3330 ft.

Pure's Clay 14, 80 ft n of c nw nw 26-1n-7e, abnd 3140 ft.

White County—Sun's Hon 1, 100 ft s of sw se 32-4s-14w, McC. 2970-79 ft, 22 bbls, 2981 ft.

White County: Wildcat—Aetna Oil et al's Burris 1, sw ne se 7-7s-10e, abnd 3113 ft.

White County: Wildcat—Allen & Sieverson's Ford 1, se se se 12-5s-10e, abnd 3210 ft.

Williamson County: Wildcat—Shell's Madison "A" 1, nw se nw 10-8s-3e, abnd 3136 ft.

OLD WELLS DEEPENED

Clark County: Wildcat—A. M. Meyers' Fudge 1, c e½ ne ne 20-12n-14w, otd 200 ft, abnd 730 ft.

White County—N. V. Duncan's Powell 1, nw nw se 1-7s-8e, otd 2943 ft, abnd 3021 ft.

WILDCAT STARTS

Bond County—P. K. Degenther's Hagon 1, nw se 2-4n-4w, dr.

Bond County—W. Braun's Wells 1, sw se se 33-6n-2w, dr.

U. S. Drilling Operations in Week Ended May 16, 1942

STATE	ALL WELLS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	*Miscel.	Total 1942	Total this Date 1941	‡WILDCATS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	Distillate	Total 1942
Alabama	....	....	....	....	....	3	....	....	....	....	....	....	3
Arkansas	2	2	....	....	....	48	61	....	....	....	....	....	7
California	13	9	....	4	....	297	399	....	....	....	....	....	8
Colorado	....	....	....	....	....	4	6	....	....	....	....	....	....
Georgia	....	....	....	....	....	2	....	....	....	....	....	....	2
Illinois	50	24	....	24	2	688	1,235	20	2	....	18	....	190
Indiana	12	6	....	5	1	143	185	2	1	....	1	....	18
Kansas	55	28	4	22	1	604	752	13	2	....	11	....	143
Kentucky	4	2	....	2	....	54	108	....	....	....	....	....	3
Louisiana	27	18	1	8	....	410	506	1	1	....	....	....	62
Michigan	17	10	1	6	....	253	298	3	1	....	2	....	60
Mississippi	....	....	....	....	....	55	63	....	....	....	....	....	16
Missouri	....	....	....	....	....	15	26	....	....	....	....	....	....
Montana	1	1	....	....	....	59	66	....	....	....	....	....	....
Nebraska	4	....	....	4	....	22	35	4	....	....	4	....	10
New Mexico	10	8	....	2	....	154	134	1	1	....	....	....	11
New York	18	11	....	....	7	449	263	....	....	....	....	....	1
Ohio	13	1	7	5	....	429	587	....	....	....	....	....	103
Oklahoma	39	18	3	12	6	608	748	10	3	....	7	....	....
Pennsylvania	42	38	....	3	1	1,207	1,427	....	....	....	....	....	....
Tennessee	....	....	....	....	....	2	8	....	....	....	....	....	....
Texas	75	42	2	30	1	2,602	3,524	18	2	....	16	....	421
West Virginia	12	2	7	2	1	269	254	....	....	....	....	....	....
Wyoming	1	1	....	....	....	31	40	....	....	....	....	....	2
Total this week	395	221	25	129	20	8,408	10,725	72	13	....	59	....	1,060
Total last week	332	184	29	96	23	8,007	10,102	51	3	1	47	....	966
Total this year	8,408	4,843	664	2,099	802	.....	.....	1,060	123	13	918	6	....

* Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

Clay County—Jones et al's Neeley 1, ne nw ne 11-3n-7e, owdd, dr.

National Pet. Co.'s Hinterscher 1, nw se se 10-4n-8e, dr.

Coles County—F. D. Walker's Sutton 1, c nw se 36-14n-7e, lcn.

Franklin County—Menhall et al's Valier Coal Co. 2, 108 ft n of ne ne se 7-6s-2e, dr.

Hamilton County—Geo. L. White's Schnuck 1, c s½ sw se 35-3s-6e, dr.

Cherry & Kidd's Leach et al 1, c n½ se ne 23-3s-7e, lcn.

Hamilton County—H. Fotiades' Mangis 1, sw nw se 27-5s-5e, dr.

Jasper County—Seaboard's Toland Comm. 1, sw sw se 2-6n-8e, lcn.

Kingwood Oil Co.'s Meinhart 1, c e½ nw nw 33-8n-10e, lcn.

Jefferson County—Magnolia's Pierce 1, nw se se 3-1s-4e, lcn.

Kingwood's Welhorn 1, 44 ft e of ne se se 13-2s-1e, dr.

Mohawk Drlg. Co.'s Cooper 1, c s½ se ne 3-2s-4e, lcn.

Madison County—M. D. Bryant et al's Meyer 1, sw ne se 16-3n-6w, dr.

Monroe County—C. H. Parriott's Robeson 1, se c nw ne 16-3n-10w, lcn.

Morgan County—G. L. Hills et al's Sharp 1, sw ne ne sw 25-13n-10w, dr.

Washington County—R. Hal Compton's Huegley-Hosemier 1, se sw se 9-2s-2w, lcn.

C. V. Richardson et al's Glazik et al 1, c s½ sw sw 26-3s-2w, lcn.

Washington County—J. F. Ashoff, Jr.'s Huelsmann 1, se c ne ne 20-1n-3w, lcn. dd.

Wayne County—Texas Co.'s Talbert 1, sw ne se nw 29-1s-6e, lcn.

Wayne County—Sinclair-Wyoming Oil Co.'s Edmison 1, ne nw se 11-2s-5e, lcn.

H. H. Weinert's Sutherland 1, c s½ sw ne 4-2s-8e, lcn.

White County—Ryan Oil Co.'s Storms 1, c w½ sw nw 9-5n-10e, lcn.

Indiana

Posey County Well Fails to Find Production

In the new field east of the Mt. Vernon field, one fourth mile south of Paul Rossi's Mauzy 1, W. C. McBride's A. Grabert 1, NE SE NE 7-7s-12w, Posey County, was abandoned, through the McClosky, at 2802 ft. Aux Vases, productive in Mauzy 1, was dry in Grabert 1.

Derrick is up for a south outpost to the new field, Smokey Oil Co.'s Aetna 1, C NW SW 17-7s-12w.

Sun Oil Co.'s L. Byrd 1, NE SE 4-8s-14w, southern Posey County wildcat, swabbed 50 barrels of oil. It is producing from Aux Vases at 2602-21 and McClosky at 2649-53 ft.

Kentucky

Union County: John Lindas spudded Kingdon 1, Phillips Petroleum Company farm-out, wildcat 3 miles south of Uniontown.

COMPLETIONS

Gibson County—Kingwood's Potts B-1, sw, ne se se 26-1n-10w, 113 bbls, 2449 ft.

Kingwood's Phillips 1, se nw ne ne 111-1n-10w, McC. 1812-16 ft, 1819-24 ft, 110 bbls, 2585 ft.

Gibson County: Wildcat—McGinnis et al's Triplett 1, 82 ft n of sw sw sw 54-1s-10w, abnd 1942 ft.

Gibson County—R. D. Brown's Coleman 1, sw ne nw 1-2s-10w, Hards'bg. 1380-84 ft, 15 bbls, 1385 ft.

Pike County—Joe Dawson et al's Huey Long et al 1, sw sw ne 16-3s-7w, abnd 1195 ft.

Posey County—Carter & Gulf's Erwin C-76 4, nw ne ne 1-7s-14w, 199 bbls, 1312 ft.

Sinclair-Wyoming's Nash 2, sw nw ne 32-7s-14w, abnd 2900 ft.

Posey County: Wildcat—Paul Rossi's Mauzy 1, ne nw nw 8-7s-12w, A. V. 2609-17 ft, 265 bbls, 2621 ft.

Posey County—Paul Rossi's Schultz 2, se nw ne 19-6s-12w, Cyp. 2344-52 ft, 44 bbls, 2352 ft.

Spencer County—E. J. Goldschmidt's Smith 2, irreg sec 6-7s-7w, abnd 1058 ft.

Vanderburg County—Paul Osborn's Eisterhold 1, nw se nw 16-7s-11w, abnd 1670 ft.

OLD WELL DEEPENED

Posey County: Wildcat—F. J. Fleming's Morelock 1, nw se nw 26-7s-14w, otd 2387 ft, abnd 2691 ft.

WILDCAT STARTS

Gibson County—R. L. Brown's Ross 1, c se se 27-1s-10w, lcn.

M. T. Schick's Mason 1, c ne se 35-2s-9w, lcn.

Knox County—Cherry & Kidd's Stickler 1, sw ne nw 13-1s-12w, lcn.

Pike County—S. C. Yingling's Blaize 1, c ne nw 12-1s-9w, dr.

Pike County—Siosi Oil Co.'s Enos Coal Co. 1, ne ne ne 18-1s-8w, lcn.

Spencer County—Mitchell & Doswell's Baird & Mason 1, sw se ne 26-7s-7w, lcn.

Vanderburg County—A. J. Glenn's Fee 1, nw se sw se 7-6s-11w, lcn.

KENTUCKY

COMPLETIONS

Daviess County—Ankeny & Gibson's Charch 6, 11-n-30, Jackson 960-1023 ft, Barlow 1034-58 ft, 75 bbls, 1060 ft.

Daviess County—Pacific Oil Co.'s Wilson 1, 3-O-28, abnd 2044 ft.

Hopkins County—Palmer & Basin Drlg.'s Triplett 1, 17-L-26, abnd 3138 ft.

Union County—Snowden & McSweeney's Davis 1, 20-O-18, Mans. 1344-49 ft, 15 bbls, 1439 ft.

WILDCAT START

Muhlenberg County—Louisville Gas & Elec. Co.'s Nugent 1, 11-K-38, dr.

Oklahoma

Garvin County Offset Finds Formation Low

Garvin County offset to discovery running low; delimiting well at Apache; South Ramsey strike in Hunton.

Garvin County: Pure Oil Co.'s Teter 2, SE NW SW 31-4n-1e, is running low below 3915 ft, this point below sand in discovery.

Caddo County: Cities Service's Ke-Har-To 1, NEc 11-5n-12w, southeastern tip test of Apache, tested salt water in the Bromide section at 3986 ft to establish water table for more accurate picture of field's productive area. Gulf Oil Corp.'s Scurch 1, NE NE SE 3-5n-12w, on southwestern edge, found saturation 3830 to 3971 ft and will complete.

Payne County: Phillips Petroleum Co.'s School 1, SW NE NE 36-18-1e, completed for 109 bbls oil, 203 bbls water from Hunton after plugging back and treating.

Logan County: Cities Service's Faulkner 1, SW NW NW 11-15n-4w, east offset to Navina discovery flowed 20 bbls by heads from Layton sand, 5006-5042 ft. Gas estimated 1,600,000 cu ft.

COMPLETIONS

Caddo County: Apache—Texas Co.'s Mulkehay 6, ne se se 2-5n-12w, abnd Bromide 5607 ft.

Creek County: Cushing—Sinclair Prairie's Yarhola 19, c nw nw 9-17n-7e, Bartl, td 2730 ft, shot 80 qts, pump 8 bbls oil and 7 bbls water, 2643 ft.

Creek County: Bruce—Central Commercial's Ricks 4, sw se se 16-17n-9e, Dutcher 2882 ft, flow 600 bbls, 2887 ft.

Creek County: Deep Rock—Tibbins' McGarth 1, c ne nw 19-14n-9e, Layton 1400 ft, abnd 2852 ft.

Creek County: Milfay—Deep Rock's Watts 1, se se nw 16-15n-7e, 2nd Wilcox 3930 ft, pb 3957 ft, shot 70 qts, flow 91 bbls, 3975 ft.

Kay County: Dilworth—McKnabb's Warren 3, se ne nw 19-28n-1e, Wilcox 3280 ft, pump 36 bbls, 3282 ft.

Kiowa County: Wildcat—Beckwith & Hollston's Hipps 3, nw se nw 4-6n-16w, granite wash 463-540 ft, 702-22 ft, limey sand 915 ft. Hunton 663 ft, Viola 733 ft, sandy lime 962-64 ft, abnd 1354 ft.

LeFlore County: Unnamed—Western Gas Co.'s McBee 1, c s½ se ne 29-9n-24e, sand 5095 ft, 25,000,000 gas, 1022 lb rock pressure, 5240 ft.

Logan County: Wildcat—Fain & Continental et al's Ferguson 1, sw sw se 27-17n-4w, Layton 4924 ft, on test 834 bbls.

Logan County: Crescent—Fain & Continentals' Ferguson 1, sw sw se 27-17n-4w, Layton 4924 ft, flow 843 bbls, 4949 ft.

Logan County: Lovell—Davon Oil's Harmon 2, c ne se 33-18n-4w, Hoover 3378-89 ft, 4.0 gas, show water, pb 4000 ft, td 4112 ft.

Muskogee County: Wildcat—Metzger & Fultz' Dodson 1, 130 ft n of c n½ ne se 22-14n-18e, sand 1120-34 ft, Muskogee lime 1358 ft, abnd 1422 ft.

Okfuskee County: Wildcat—Doak & Hughes' Hensley 1 nw se nw 21-13n-9e, Dutcher 3180 ft, bailed out to 3195 ft, show 43 bbls oil, no water, td 3198 ft, shot 20 qts at 3190-95 ft, 17 bbls.

Oklahoma County: Jones—Hall & Briscoe's Dahlrymple 1, se se nw 28-13n-1e, Cleveland 4787 ft, shot 20 qts, pump 100 bbls, 4871 ft.

Okmulgee County: Aztec—L. Stekoll's Holmes 4-A, sw c ne ne 7-11n-12e, sand 2270 ft, flow 50 bbls, 2282 ft.

Okmulgee County: Tiger Flats—W. S. Bogie's Mickens 1, nw ne ne 14-12n-12e, sand 2038-44 ft, 100,000 gas, 600 lbs rock pressure, 2275 ft.

Okmulgee County: Pollyanna—B. J. Collins' Ware 1-A, 60 ft e of c e½ ne ne 36-16n-11e, Bartles. 1697 ft, shot 80 qts, pump 10 bbls, 1776 ft.

Osage County: Nelagoney—M. C. Miller et al's 9, nw nw ne ne 23-25n-10e, Bart. 1693 ft, abnd 1766 ft.

Pawnee County: Cleveland—Sinclair Prairie's Jones 38, c se nw 20-21n-8e, Bartlesville 2325 ft, shot 80 qts, pump 3 bbls, td 2518 ft.

Payne County: Wildcat—Superior Olson et al's Knipe 1, sw sw ne 9-17n-2e, Oswego 4020 ft, Prue 4119 ft, Verd. 4160 ft, Skinner 4212 ft, Pink lime 4240 ft, Redford 4282 ft, Miss. 4440 ft, Wood. 4570 ft, Hunton 4615 ft, Sylvan 4705 ft, Viola 4780 ft, abnd 4882 ft.

Pottawatomie County: Wildcats—Continental's Baker 1, sw se se 33-9n-3e, Belle City 2844 ft, Hogs. 3175 ft, Ccb. 3528 ft, 2500 bbls, 4225 ft.

Smith Bros.' Fundis 1, c sw ne 33-8n-3e, Hog. 3180 ft, Ccb. 3540 ft, Earlsboro zone 3560 ft, Mayes 4570 ft, Woodford 4640 ft, Hunton Chert 4670 ft, cored 4679-95 ft, rec 12 in, Hunton stain, bubble oil and gas in spots, Sylvan 5035 ft, abnd 5456 ft.

Stanolind-Amerada's Malone 1, c sw sw 4-9n-4e, Belle City 2320 ft, Hog. 2715 ft, Wewoka 3290 ft, Upper Calvin 3816-50 ft, cored 3831-43 ft, 7 ft, shaley sand and sandy shale, lower Calvin 4040-67 ft, Earls. 4220-45 ft, Mayes 4485 ft, Wood. 4580 ft, Hunt. 4722 ft, Sylvan 4761 ft, Viola 4869 ft, Dense 4952 ft, 1st Wilcox 5001-19 ft, open 45 minutes rec water, cored 5100-65 ft, streaked dolomite in water sand, abnd 5162 ft.

Pottawatomie County: Tecumseh-East—Ohio's Meyer 1, 110 ft w of nw ne nw 21-9n-4e, Viola 4555 ft, 3000 gals acid, pump 668 bbls, 4808 ft.

Pottawatomie County: Hotulka—R. Olsen's Harrington 1, sw nw 24-9n-4e, Hunton 4234 ft, 500 gals acid, flow 628 bbls, 4260 ft.

Pottawatomie County: Hotulka-West—Atlantic's Krouch 1, nw sw nw 27-9n-4e, Viola 4420 ft, 5000 gals acid, pump 276 bbls, 4671 ft.

Seminole County: Wildcat—Richard Hughes et al's Grugg 1, se ne se 13-11n-7e, Checkerboard 1330 ft, Cleveland 1350 ft, Osw. 2125 ft, Prue 2140 ft, Verd. 2535 ft, Skinner 2645 ft, Inola 3160 ft, Brn. ls. 3340 ft, sand 3660 ft, abnd 3708 ft.

Seminole County: Wildcat—Big Chief's Creach 1, c n½ ne se 29-8n-7e, Calvin 2125-42 ft, Brn. lime 3105 ft, Cromwell 3305-65 ft, Wood. 3990 ft, abnd 4311 ft.

Stephens County: Velma—Skelly's Franklin 27, se sw se 34-1s-5w, sand 1204-10 ft, td 1220 ft, pb 1210 ft, shot 10 qts, pump 36 bbls.

Stephens County: Empire—Pace Pet. Co.'s Nelson 1-B, 70 ft n of se se ne 28-1s-8w, sand 2502-09 ft, td 2511 ft, perf casing, est 15 bbls.

Stephens County: West Loco—L. W. Winkler et al's Peck 1, 80 ft s of ne ne ne 2-3s-6w, abnd 2001 ft.

Stephens County: Loco-West—Razin Bros.' Lowery 2, c nw ne sw 6-3s-5w, lime 1208 ft, pump 30 bbls, pb 1190 ft, td 1797 ft.

Tulsa County: Bixby—Abe Pepis' Oswald 2A, se se nw 6-17n-13e, Miss. 1985 ft, pb 1875 ft, abnd 2025 ft.

INPUT WELLS

Creek County: Glenn—Gulf's Rhodes 24, se nw nw 21-17n-12e, Glenn 1410-1547 ft, pb 1515 ft, gas & air repressure, td 1552 ft.

Osage County: Avant—Sinclair Prairie's 59, ne c se ne 19-23n-12e, Bart. 1582-1658 ft, gas repressure, 1725 ft.

OLD WELLS DEEPENED

Garfield County: Garber—Sinclair Prairie's Campbell 16, sw sw ne 30-22n-3w, Bart. 1808-20 ft, pump 47 bbls oil, otd 1512 ft, td 2059 ft.

Jackson County: Altus—Navajo Pet. Co.'s Hensley 5, nw se nw 10-1n-20w, otd 1541 ft, granite wash 1406-25 ft, pay 1425-55 ft, 1495-1504 ft, 1537-41 ft, 1541-96 ft, pump 10 bbls, 1596 ft.

Osage County: Buell—Grover Burch's No. 1, nw nw nw nw 29-23n-9e, otd 601 ft. Bartlesville 2050 ft, shot 60 qts, pump 20 bbls oil and 20 bbls water, 2070 ft.

Seminole County: Earlsboro—Barnsdall & Atlantic's Sango 6-A, 52 ft e of nw sw nw 1-9n-5e, otd 4265 ft, Wilcox 4254 ft, shot 20 qts, pump 10 bbls oil and 350 bbls water, 4269 ft.

WILDCAT STARTS

Caddo County—Texas Co.'s Mah-Vo-Chu-Ky 1, c sw ne sw 20-5n-11w, cellar.

Comanche County—Garr & McCracken's Campbell 1, c se ne 10-2n-10w, spud.

Creek County—Kennedy's Eason 1, sw nw se 12-14n-9e, mchn.

Tibbens Oil Co.'s Abraham 1, c nw ne 19-14n-9e, c&p.

Hughes County—Phillips Pet.'s Smith 1, nw se sw 31-7n-11e, lcn.

Jackson County—James S. Smith's Mack 1, c nw ne nw 23-2n-20w, rigging tools.

Jefferson County—W. W. Woodworth's Sullivan 1, c sw nw ne 28-3s-4w, dr.

Kay County—Ingling & Parker's Stone 1, c se se 30-25n-1e, testing.

Kiowa County—E. M. Thompson's Baker 1-A, nw ne nw 7-6n-18w, sd.

Bud Lewis' James 1, c sw sw ne 29-7n-17w, lcn.

Logan County—Kutat et al's School 1, se ne sw 16-17n-1w, cellar and pits.

McClain County—A. Z. Phillips' Kilburn 1, c sw nw 28-5n-3e, spud.

McIntosh County—Phillips' Checotah 1, c se sw 16-11n-17e, dr.

Noble County — Danciger et al's Province 1, nw nw sw 4-20n-2w, rig.

Pawnee County—McBride, Inc.'s Gilbert 1, se ne sw 19-23n-3e, dst.

Payne County—Keener & Deep Rock's Boyd 1, nw nw ne 27-19n-6e, lcn.

Pottawatomie County—Ed Highfill et al's Boyd 1, ne se nw 21-8n-4e, mim.

Smith Bros.' Dawson 1, c ne ne 6-9n-3e, cellar.

Kansas

Peace Creek Area Again Extended

Peace Creek has a mile south extension at Simpson Oil Co.'s Souder 1-B, SW NE NE 32-23-10w, Reno County, where well filled from Viola, 3718 ft, after treating with acid, then flowed at estimated 100 bbls per hr.

Lion Oil and Ref. Co.'s Wiederoder 1, SW NW SW 12-23-10w, ¼ mi east of field, filled from Viola, 3753-3763 ft, prior to acid.

Stafford County: Stanolind Oil & Gas Co.'s Vincent 1, C EL SW SE 5-24-11w, 3 mi nw Zenith, is running high on Kansas City-Lansing at 3387 ft. Simpson's Souder 1, in Reno County, may as well be considered Zenith outpost to northeast and may be instrumental in linking these two fields of Viola production. Zenith pool produces from Misener and Viola; Peace Creek from Viola.

COMPLETIONS

Barton County: Wildcat—Gulf's Steinert 1, ne ne sw 4-16s-15w, Anhy. 995 ft, Ft. Riley 2000 ft, Topeka 2939 ft, Lansing 3223 ft, Congl. 3470 ft, Arb. 3526-55 ft, abnd 3555 ft.

Barton County: Kraft-West — Black-Marshall's Schneweis 2, sw ne nw 5-17s-11w, Arb. 3345 ft, 2000 gals acid, pump 468 bbls, 3360 ft.

Barton County: Kraft-Prusa—Gulf's Standinger 1, c se se 7-16s-11w, Arb. 3284 ft, pump 277 bbls, 3294 ft.

Barton County: Kraft-Prusa-Northeast—J. J. Lynn's Kraft 2, c s½ sw nw 36-16s-11w, Arb. 3400 ft, abnd 3420 ft.

Barton County: Beaver—Gulf's Busnell 1, c s½ sw ne 8-16s-12w, Lansing 2703 ft, 6000 gals acid, pump 277 bbls, pb 2959 ft, td 3319½ ft.

Barton County: Semi-Wildcat — Luther Mackall's Disque A1, ne ne ne 23-17s-11w, Arb. 3311 ft, 1000 gals acid, shot 10 qts, 2500 gals acid, pump 307 bbls, 3330 ft.

Barton County: Wildcat—Falcon-Seaboard & Barnsdall's Gross 1, sw sw ne 26-16s-14w, Anhy. 910 ft, Lansing 3165 ft, Congl. 3384 ft, Arb. 3420 ft, abnd 3445 ft.

Cowley County: Rainbow Bend — Meade Prod.'s Hower 1, se nw se 32-33s-3e, Miss. 3324 ft, abnd 3329 ft.

Cowley County: Winfield Gas Area—Murfin's Reynolds 1, ne ne nw 14-33s-4e, Arb. 3387 ft, abnd 3392 ft.

Cowley County: Gibson—Sinclair Prairie's Jones 1, nw ne ne 29-34s-3e, Bartle. 3356-3393 ft, shot 40 qts, pump 312 bbls, 3393 ft.

Cowley County: Rahn—J. Garden's Rahn 2, nw se nw 13-34s-5e, Bartl. 2913 ft, flow 205 bbls, 2945 ft.

Cowley County: Unnamed—Arthur Brewer's Coulson 1, se sw sw 33-33s-3e, Miss. 3336 ft, abnd 3350 ft.

Cowley County: Wildcats—Earl Wakefield's Henderson 1, c n½ nw nw 26-32s-3e, Kansas City 2680 ft, Miss. 3146 ft, Arb. 3453 ft, 52 holes 2679-2710 ft, 1500 gals acid, 24 bbls, td 3462 ft.

Westgate-Greenland Oil Co.'s Morton 1, c n½ ne sw 2-33s-5e, Layton 2285 ft, Bart. sand 2925 ft, base sand 2938 ft, Miss. 3085-3133 ft, abnd 3133 ft.

Ellis County: Bemis-Burnett — Champlin's Mock 3, sw nw ne 17-11s-17w, Arb. 3349-54 ft, 2700 bbls, 3358 ft.

Nadel & Gussman's Lynn 1, ne se se 14-11s-18w, Arb. 3450 ft, 1500 gals acid, 1451 bbls, 3470 ft.

Ellis County: Wildcat—Cities Service's Joy 1, ne ne se 24-12s-19w, Topeka 3250 ft, Lansing 3557 ft, Congl. 3937 ft, Simpson 3995 ft, Arb. 4005 ft, abnd 4042 ft.

Ellsworth County: Stoltenberg—Robertson & Hinkle's Stratmann 3, se nw ne 1-17s-10w, Simpson 3300 ft, Arb. 3312 ft, abnd 3323 ft.

Finney County: Semiwildcat—Fin-Ker Oil & Gas' Hamlin 2, sw ne ne nw 30-24s-34w, Herrington 2457 ft, pay 2466 ft, Winfield 2525 ft, pay 2540-45 ft, Ft. Riley 2566 ft, 20,000 gals acid, 23,250,000 gas, 2671 ft.

Greenwood County: Virgil—Henderson Oil's Schneider 7, se sw sw 9-23s-13e, Miss. chat 1762 ft, 2000 gals acid, pump 8½ bbls, 1820 ft.

Greenwood County: Hilltop — Shaffer & Howell's Schindler 1, nw ne nw 16-23s-13e, Miss. 1765 ft, shot 40 qts, 1000 gals acid, pump 15 bbls, 1791 ft.

Jefferson County: McLouth—McLaughlin et al's Zachariah 2, c se ne 20-9s-20e, sand 1359 ft, 8.4 gas, 1371 ft.

O. J. Cornell et al's Mosberger 1, c nw se 21-9s-20e, Miss. 1460 ft, abnd 1538 ft.

Hatcher & Fisk's Bower 1, c ne sw 5-10s-20e, McLouth sand 1527 ft, 6.25 gas, 1544 ft.

McLaughlin's McLeod & Wisdom 2, c ne sw nw 8-10s-20e, McLouth sand 1528 ft, 5.775 gas 1553 ft.

Sherrod et al's Barine 1, nw ne 8-10s-20e, McLouth sand 1516 ft, shot 40 qts 1515-32 ft, pump 3 bbls, pb 1532 ft, td 1623 ft.

McPherson County: Lindsborg—M&L Oil's Gustafson 1, c se sw 7-17s-3w, Viola 3362 ft, 3000 gals acid, pump 616 bbls, 3371 ft.

McPherson County: Wildcat—Phillips' Flo 1, c s½ ne se 29-17s-1w, Lansing 2080 ft, Miss. 2655 ft, abnd 2745 ft.

Norton County: Wildcat—R. W. Rhine's Wallack 1, c ne ne nw 22-2s-23w, granite 3731 ft, Arb. 3646 ft, abnd 3733 ft.

Phillips County: Dayton—Carter's Garber 2, c sw sw 36-2s-19w, Lansing 3144 ft, rip casing from 3143-3320 ft, 10,000 gals acid, pump 778 bbls 3348 ft.

Phillips County: Ray—Cities Service's Solt 2, ne nw sw 31-5s-20w, Reagan 3636 ft, pay 3640-43 ft, 966 bbls, 3643 ft.

Pratt County: Wildcat—Shell's Green 1, se ne sw 6-29s-12w, Anhy. 744 ft, Topeka 3284 ft, Lansing 3855 ft, Miss. 4313 ft, Base Miss. 4385 ft, Viola 4439 ft, Simpson shale 4536 ft, Simpson Dolo. 4547 ft, Arb. 4659 ft, abnd 4736 ft.

Reno County: Wildcat—Cities Service's Morton 1, sw sw ne 17-24s-8w, Lansing 3180 ft, no Miss., Viola 3770 ft, Simpson 3797 ft, Arb. 3876 ft, 185 bbls oil and 32 bbls water, 3910 ft.

Reno County: Northeast Peace Creek — Leader's Tonn 5, sw ne se 11-23s-10w, Viola 3751 ft, 3000 bbls, 3762 ft.

Reno County: Peace Creek — Republic's Werner 1, sw se nw 15-23s-10w, Viola 3773 ft, pay 3781-83½ ft, 3000 gals acid, flow 3000 bbls, 3783½ ft.

Cities Service's Kreie A-2, sw nw ne 28-23s-10w, Viola 3799 ft, 1500 gals acid, 3000 bbls, 3809 ft.

Reno County: Zenith—Alf Landon's Porter 1, c s½ nw se 7-24s-10w, Viola 3692 ft, abnd 3738 ft.

Reno County: Hendrickson—Lion's Phillips 2, Viola 3704 ft, 3000 gals acid, 752 bbls, ¾-in, 3728½ ft.

Reno County: Peace Creek - Northeast—Cities Service's Estey 2, sw ne ne nw 14-23s-10w, Viola 3746 ft, 1000 gals acid, 624 bbls, tubing, 3755 ft.

Reno County: Wildcat—W. C. Emerich et al's Scott 1, ne se ne 22-25s-4w, Anhy. 745 ft, Topeka 2192 ft, Lansing 2795 ft, Miss. 3576-3922 ft, Misener 4022 ft, Sylvan 4024 ft, Viola 4043 ft, Simpson 4060 ft, Arb. 4148 ft, abnd 4183 ft.

Rice County: Wildcat—Herndon Drlg. Co.'s Wellman 1, sw sw sw 20-21s-9w, Anhy. 280 ft, Ft. Riley 1480 ft, Florence 1570 ft, Wreford 1650 ft, Lansing 2958 ft, Kinderhook 3278 ft, Maquoketa 3326 ft, Viola 3408 ft, Simpson 3464 ft, Arb. 3522 ft, abnd 3555 ft.

Rice County: Keesling—R. Olsen's Peterson 2, c s½ nw ne 4-20s-9w, Arb. 3259 ft, pb 2960 ft, perf at 2949-60 ft, abnd 3273 ft.

Rice County: Genesee—Continental's Ainsworth 6, sw ne nw 30-18s-7w, Arbuckle 3181 ft, 2000 gals acid, pump 554 bbls, 3183 ft.

Rice County: Cramm—Lauck-Moncrief's Six 1, c n½ ne nw 27-19s-9w, Arb. 3187 ft, pay 3208-11 ft, 3500 gals acid, pump 231 bbls, 3216½ ft.

Rice County: Bornholdt—Westgate-Greenland's Hodge 3, c s½ sw ne 25-20s-6w, Miss. 3275 ft, abnd 3279 ft.

Rooks County: Baum—Palmer Oil Co.'s Baum 2, c s½ nw ne 10-10s-16w, abnd 3320 ft.

Rooks County: Dopita—Phillips & Continental's Henrus 1, c ne nw 31-8s-17w, Arb. 3398 ft, pump 149 bbls, 3403 ft.

Russell County: Wildcat—Colorado Pet.'s Berrick 1, c n½ ne nw 13-15s-13w, Anhy. 668 ft, Lansing 2923 ft, Congl. 3219 ft, Arb. 3228-80 ft, abnd 3280 ft.

Russell County: NW Greenvale—Magnolia's Borell 2, se sw ne 32-14s-12w, Arb. 3177 ft, pump 165 bbls oil, 10 bbls water, 3183 ft.

Jones & Shelborne's Kuhnle 7, ne sw sw 4-15s-12w, Lansing 2970 ft, 8000 gals acid, 2220 bbls oil and 780 bbls water, 3043 ft.

Russell County: South Big Creek — Max Cohen et al's Mitchell 1, nw sw se 6-15s-14w, Arb. 3225 ft, abnd 3255 ft.

Saline County: Wildcat—Harwood et al's Schwartz 1, c s½ sw se 13-16s-1w, Ft. Riley 365 ft, Lansing 2005 ft, Miss. 2655 ft, abnd 2677 ft.

Stafford County: Stafford — Stanolind's O'Conner-Schneider 1, c s½ se sw 11-24s-12w, Viola 3841 ft, pay 3843-48 ft, 2000 gals acid, 3000 bbls oil, 3847 ft.

Stafford County: Seesburg — Continental's Mather 3, se ne nw 12-25s-13w, Arb. 4133 ft, 1000 gals acid, 3000 bbls, 4141 ft.

OLD WELL DEEPENED

Marion County: Lost Springs—Larieux & Harrington's Honska 1, c e½ ne ne 5-18s-4e, otd 2441 ft, Miss. 2409 ft, td 2461 ft, pb 2434 ft, shot 80 qts, abnd.

WILDCAT STARTS

Barber County—Pryor & Lockhart et al's Atkins 1, c e½ se sw 14-30s-15w, rur.

Barton County—Helmerich & Payne's Merton 1, c nw ne 10-19s-15w, lcn.

Cowley County — Earl Wakefield et al's Waite 1, ne nw nw 36-31s-3e, mim.

Margay's Wilson 1, se se sw 3-32s-3e, cellar.

Ellis County—N. Appleman's Jantzen 1, sw sw se 16-12s-16w, brr.

Kingman County—Booth & Absher's Beshore 1, c e½ se sw 29-28s-5w, lcn.

Dickey Oil's Davis 1, c s½ sw sw 27-27s-6w, mim.

Leavenworth County — Frank Whitten's Courtney 1 c sw ne 15-9s-20e, dr.

Marion County—Zimmeren & James' Melsher 1, se se ne 20-18s-4e, mim.

Pratt County—Hunnum Drlg. et al's Beck 1, sw sw sw 6-27s-12w, lcn.

Rush County—Lario Oil & Gas' Schwindt 1, c n½ ne sw 15-17s-17w, lcn.

Russell County—Skelly's Lewis 1, nw nw ne 16-14s-13w, lcn.

A. H. Witt's Fee 1, sw sw ne 3-14s-14w, lcn.

Hartman & Blair's Boxberger 1, sw sw ne 4-14s-14w, cellar.

Saline County—E. B. Shawver's Agin 1, c nw ne 33-15s-1w, rur.

Nebraska

Richardson County Test Plugs Back From Wilcox

Wilcox sand fails to produce; Barada well tests 200 bbls in 18 hrs.

Richardson County: Skelly Oil Co.'s Wiltse 1, C E½ NW SE 10-1n-14e, deep test in Dawson pool, found sulphur water in Wilcox sand, top 3230 ft, and plugged back to test Simpson lime, which had show. Viola may later be tested. Hunton lime remains only formation producing in Nebraska.

I. Taylor's Zetner 1, C W½ SW SE 36-3n-16e, Barada pool well, made 200 bbls daily on 18-hr test.

NEBRASKA
COMPLETIONS

Cass County: Wildcat — Sherrod & Allen's Selbold-Parks 1, nw nw sw 3-12n-11e, Viola 861 ft, St. Peter 1268 ft, Pre-Cambrian 1313 ft, abnd 1323 ft.

Frontier County: Wildcat—Sinclair Prairie's Brown 1, c sw sw 21-5n-29w, abnd.

Redwillow County: Wildcat—Sinclair Prairie's Land Bank 1, sw sw se 11-2n-28w, abnd.

Richardson County: Wildcat—Ohio's Crook 1, c nw sw 31-2n-17e, abnd 2589 ft.

WILDCAT START

Furnas County—C. W. Trickett's Gossie 1, nw nw nw 33-2n-21w, dr.

Rocky Mountain Area

Several South Dakota Tests in Prospect

Announcement by Central South Dakota Oil & Gas Company of Pierre, South Dakota, of plans for drilling the first deep test in Hughes County, center of current oil activity in the state, is the latest development in the South Dakota oil play.

The new Hughes County hole will be located near the center of the southeast quarter of 18-11n-76w.

The well will be drilled under terms of a contract between Central South Dakota Company and Harris and Company, recently incorporated drilling firm of Pierre, of which W. L. Harris, Oklahoma City, is president.

The contract, according to Howard Van Camp, secretary of Central South Dakota, provides for testing to precambrian rock, which geologists esti-

mate will be found at not more than 4500 feet.

The location is part of a block of more than 30,000 acres of leases which have been taken up by the company. The leases cover most of an area of high magnetic intensity as mapped by the South Dakota Geological survey and by Kerr-Lynn & Company of Oklahoma City, which has an acreage interest.

The well will be drilled with heavy rotary rig using diesel-electric power.

Location is across the Missouri river from deep tests made in central South Dakota in recent years. In the Standing Butte Oil test, in Stanley County several years ago, showings of oil were found in the younger formations. The well was abandoned on reaching the Pahasapa limestone.

In 1940 two slim holes were drilled by The Carter Oil Company in Potter and Stanley counties, but results have not been announced although each of them penetrated about 4000 feet of sedimentary formations.

Previous Test

The only information on formations in Hughes County comes from test started in the Blunt region, seven miles north of the new well site and a core hole drilled by the Kerr-Lynn Company about seven miles east of Pierre in 1939. Both were abandoned when heavy artesian water flows were encountered, one in the Dakota formation and the other in the Sundance series below the Dakota-Lakota sandstones.

The Kerr-Lynn hole encountered one of the largest amounts of natural gas in the Dakota sandstone of any well ever drilled in the Pierre vicinity. Gas has been produced from wells in Pierre and Fort Pierre for more than 40 years.

A map published recently by the South Dakota Geological survey shows a number of structures with high magnetic intensities in central South Dakota. The new well is located on one and Pierre and Fort Pierre on another.

Three or four other tests may be drilled in South Dakota this summer if equipment is available. Preparations for drilling operations are reported being made on the Moss Agate basin about 15 miles north of Edgemont in Fall River County and a group of Denver men are reported negotiating for a test to be drilled near Rumford, also in Fall River County, on the Hat Creek structure which has long attracted the attention of geologists.

Leases in Fall River County have also been taken in the vicinity of the Red Canyon test drilled in 1925 by H. L. Hollingsworth and which found a strong showing of oil at 2085 feet in the Amdam sand. Casing from this well was salvaged in 1941 and when it was pulled several barrels of oil were bailed daily from the hole.

Another Test Rumored

The Carter Oil Company is reported considering a test in Corson County in north central South Dakota and negotiations have been in progress for some time for the drilling on the Two Top structure, 25 miles north of Belle Fourche, in Butte County.

Little information has become available on three oil tests undertaken in South Dakota last year. At latest reports operations were continuing near Rapid City where a test is being drilled by Lem Johnson of Newcastle, Wyoming, for a group of Rapid City businessmen; in the Elbo Bend area near Belle Fourche where Adolph Amunson and Martin J. O'Brien of Newell are drilling a shallow test and near Fairburn in Custer County where a test is being put down by Joe Cornacher and H. C. Howard of Newcastle.

Pilot Butte Production From New Sand

Pilot Butte new sand discovery pumps 750 barrels initial. Wildcats start in Colorado and Montana. Extension at Oregon Basin.

Pilot Butte: Superior Oil Co. and British American Crude Oil Producing Co.'s Tribal 1, SE SW SW 15-3n-1w, completed for 750 bbls on pump, 24.7-gravity. Production is through 250 perforations at 6184-6325 ft, through 7-in set at 6446 ft, and opposite the Tensleep sand a new producing horizon for the old Pilot Butte field, discovered for shallow production in 1916. Well is shut in for storage.

Douglas Creek: Continental, Union, and Superior are preparing to drill a deep wildcat on the Douglas Creek structure, Rio Blanco County, northwestern Colorado. Structure is 15 miles southeast of the Rangley field.

South of Cut Bank: R. C. Tarrant has spotted location for Wood 1, C NE NW 32-28n-1w, 25 miles south of Cut Bank field, Montana. Tarrant et al holds 16,000 acres in the area.

Oregon Basin: Pointing toward the possibility that the saddle between the two highs of Oregon Basin may be productive, Texas Co.'s Freeman 2, C SW NE 20-51n-100w, extended the South Dome a quarter-mile north swabbing 561 bbls in first 19 hours. Total depth is 3867 ft.

MONTANA

COMPLETIONS

Glacier County: Cut Bank—Santa Rita Oil & Gas Co.'s Klein 2, c ne nw 21-32n-5w, flow 30 bbls, 2814 ft.

WYOMING

COMPLETIONS

Fremont County: Pilot Butte — British American Oil Producing Co. and Superior Oil Co.'s Tribal 1, se sw sw 15-3n-1w, pump 750 bbls 24.7-gr, 250 perf Tensleep 6184-6325 ft, 7-in 6446 ft, pb from 6775 ft, td in Amsden; new sand.

NEW MEXICO

COMPLETIONS

Chaves County: Discovery—Effie L. Brown et al's State 1, c se nw 26-10s-26e, elev 3741 ft, salt 450 ft, pump 2 bbls initial, shot 50 qts 745-75 and 50 qts 760-75 ft, Permian pay 760-77 ft, td 1700 ft.

Eddy County—Barney Cockburn et al's Etz 2, c se se 35-16s-30e, flow 300 bbls, 2-in, shot 56 qts 3000-3043 ft.

Barney Cockburn et al's Etz 3, c sw sw 35-16s-30e, flow 456 bbls, 2-in, shot 80 qts 2984-3024 ft.

Choate & Brown's Etz 1, c nw sw 35-16s-30e, flow 212 bbls, 2-in, shot 170 qts 2972-3026 ft.

Grayburg Oil Co.'s Burch 6-B, c sw sw 19-17s-30e, flow 233 bbls ¾-in, acid 1500 gals 3005-09 ft, td 3200 ft.

Sanders Bros. et al's Leonard 5, c se nw 34-16s-30e, flow 180 bbls, 2-in, shot 155 qts 2890-2975 ft.

Stroup & Yates' Travis 5, ne sw nw 17-18s-29e, flow 19 bbls, 2-in, shot 240 qts 2537-2657 ft, td 2687 ft.

Williams & Ployhar's Harbold 3, se se ne 35-17s-27e, abnd 480 ft.

Neil H. Wills et al's Wills 2, c sw sw 13-20s-28e, pump 30 bbls 36.9-gr, shot 30 qts 780-810 ft.

Lea County: Lynn — Continental et al's Stevens 1-B-15, c sw sw 15-23s-36e, abnd 3850 ft.

West Texas

Andrews County Strike Starts 12 Operations

Drilling program in Andrews County enlarged to 12 operations on short-term University leases as result of recent Ellenburger discovery and Permian extensions. New depth record in completion of northeastern Ward County wildcat in Ellenburger; shallow strike made in southeast portion county. Sterling County's first Ordovician prospect cased for test.

Andrews County: Phillips Petroleum Co.'s University-Andrews 2, C SW SE Sec 30, Blk 10, second Ordovician test on 18,000-acre Embar prospect, confirmed earlier indications of making a big producer in flowing 721 bbls 44.3-gr oil through open 2-in tubing first 6 hours, gas-oil ratio 556/1. Production from dolomite at 7855 ft, elev 3246 ft, with 5½-in 7806 ft in Ellenburger, topped 7750 ft, estimated 58-ft section registering porosity and saturation. Discovery found regular Permian dry, but passed up prolific flow oil and gas in Clear Fork 6215-6450 ft, which will be tested by 2 of the 6 projects launched by company on Embar structure and to northwest in West Andrews pool. Atlantic is is starting 2 and Stanolind 1 in the latter area, while more than a dozen additional 160-acre University tracts will require tests before end of year to forestall lease expirations.

Two extensions along the 5¾-mile interval between West Fuhrman and Emma pools resulted in the start of 3 tests, and more than dozen 160-acre tracts on the trend will expire in June or October. Possibility of Clear Fork, or Ordovician production will be determined before the latter month. Siemoneit Drilling Co. et al's University-Texaco 1, 1¾ miles south of West Fuhrman pool, tested 2 to 3 bbls oil hourly by swabbing without acid or nitro shot from broken saturation 4325-4580 ft, elevation 3218 ft, assuring commercial well. Mascho Oil Co.'s University-Sun 1, 2 miles northwest Emma, yielded 5 to 10 bbls oil hourly on swabbing test after 310-quart dump shot nitro 4373-4514 ft, elev 3216 ft, and will probably flow when equipped with tubing packer. These extension wells are relatively flat on structure, and the intermediate acreage will probably produce. Offsets to Mascho project have been started by Magnolia and Skelly, with the latter also starting a test between the outposts.

Ward County: Shell's Sealy-Smith 1, NE NE SE G&MMB&A 38, Blk A, 7½ miles east of regular Permian production, flowed 120 bbls 47-gr oil natural, 2-in tubing, gas-oil ratio 1185/1, from Ellenburger 10,082-10,111 ft, establishing depth record for production in district. The well was treated with 1000 gals mud acid followed by 5000 gals under pressure, then flowed 64 bbls first hour and 80 bbls second hour, gas-oil ratio 1750/1. Official gauge delayed pending tankage. Since Stanolind surrounds Shell's discovery block on north, east and west, and Gulf has control of all acreage to the south, no appreciable amount of development will occur until conditions warrant, although the discovery will have base allowable of 440 bbls daily. In southeastern Ward, Jimmie O'Quinn et al's Nichols 1 flowed

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oil over mast after 103-quart nitro shot at 2410-42 ft, td 2449 ft, and cavings will be removed before attempting gauge. It is north offset to a test that almost made commercial well at same level.

Sterling County: Gulf's Foster 1-C, 2½ miles south by east of Sterling City and first Ordovician test for county, cemented 5½-in pipe near top of Ellenburger at 8080 ft, elevation 2298 ft, after losing returns in coring to 8117 ft. Recovered cores from Ellenburger were not encouraging for production, and it was deemed necessary to run pipe for a decisive test, since the wildcat is regionally high when correlated with Ordovician failure to the west in Glasscock and north in Mitchell County.

Deep Prospects: Plymouth Oil Co.'s Alford 1, eastern Upton County, abandoned after cleaning up fishing job at 10,384½ ft in Devonian cherty-lime, topped at 10,018 ft, elevation 2669 ft. In Lubbock County, Stanolind's Stinnett 1, 6 miles southeast of a pumper in Clear Fork, drilling dry lime 6890 ft and may halt at 7000 ft to plug back and test 4700-ft zone. Stanolind's Hopping 1, Lamb County, drilling dolomite 6480 ft. In King County, Mid-Continent Pet. Corp.'s Burnett 1 drilling shale 5980 ft, and Humble's Matador 2-A, Dickens County, drilling shale 5550 ft. The latter trio to explore Ordovician.

COMPLETIONS

Cochran County: Slaughter — Honolulu's Igoe-Smith 38, nwc lab 15, leag 56, Oldham CSL, flow 1186 bbls 2½-in, acid 10,000 gals 4978-5031 ft.

Superior of Cal.'s Dean 1, 440 ft from s and 2525 ft from w lines leag 57, Martin CSL, pump 420 bbls, plus 18% water, acid 9000 gals, perf 4924-60 ft, td 5015 ft.

Superior of Cal.'s Dean 2, 4610 ft from w and 440 ft from s lines leag 57, Martin CSL, pump 324 bbls, plus 20% water, acid 10,000 gals, perf 4928-58 ft, td 5009 ft.

Crockett County: Couch—Humble's Owens 1-D, c nw ne HE&WT 15, blk GG, pump 208 bbls, acid 1000 gals 1965-2000 ft.

Humble's Owens 1-E, c ne se HE&WT 15, blk GG, abnd sul w 2155-2240 ft.

Culberson County: Wildcat—John Wolfe et al's Wilson-Briggs-Hubbard 1, 2316 ft from n and 1500 ft from e lines sec 1, blk 112, PSL—W. N. Holder sur, elev 3153 ft, abnd sul water 3025-30 ft.

Ector County: Foster—North American Oil Consolidated's Johnson-Ohio 3, nw sw se T&P 46, blk 43, T-1-S, flow 486 bbls, ½-in, shot 530 qts 4080-4142 ft.

Hockley County: Slaughter — Texas Co.'s Mallet 7-C, swc lab 13, leag 51, Scurry CSL, flow 933 bbls cas, acid 13,000 gals 5012-51 ft.

Texas Co.'s Slaughter 133, nwc lab 83, leag 38, Zavalla CSL, flow 1408 bbls cas, acid 12,000 gals 4968-5020 ft.

Midland County: Wildcat — Broderick & Calvert-Geo. Livermore's Bryant 1, c nw sw T&P 24, blk 39, T-3-S, elev 2699 ft, anhydrite 1580 ft, Yates sand 2580 ft, grains 2600 ft, solid lime 4255 ft, San Angelo 4915 ft, Clear Fork 5230 ft, abnd 6104 ft.

Pecos County: Abell—Magnolia's Crockett 4, c lot 10, H&TC 4½, blk 3, flow 389 bbls 41.7-gr, ½-in, acid 1500 gals, Ellenburger 5820-97 ft.

Stanolind's Kistler 2, 2004 ft from nw and 1958 ft from sw lines H&TC 5, blk 3, flow 563 bbls, ½-in, natural, Simpson perf 5274-84 ft, td 5305 ft.

Pecos County: Taylor-Link—Wm. Wolfe et al's University 2-B, se se nw sec 32, blk 16, jkd 554 ft.

Reagan Conuty: Barnhart—Amerada's University 1-R-C-a, near c se ne sec 4, blk 48, elev 2782 ft, base black shale 8967 ft, flow 254 bbls, ½-in, shot 224 qts, Ellenburger 9012-9124 ft, acid 8500 gals, pay 9047-9108 ft, td 9178 ft.

Amerada's University 1-R-E, c nw se sec 9, blk 48, elev 2726 ft, base shale 9031 ft, flow 182 bbls 44.7-gr oil, 27 bbls water, ½-in, acid 5750 gals, Ellenburger perf 9173-9223 ft.

Upton County: Wildcat—Plymouth's Alford 1, 467 ft from se and ne lines lot 2, sec 50½, P. B. Scott sur, elev 2669 ft, anhydrite 1250 ft, salt 1310 ft, lime 3590 ft, base black shale and Permian 9572 ft, lower Pennsylvanian 9572 ft, Devonian 10,018 ft, abnd cherty-lime 10,384½ ft.

Winkler County: Keystone—Sid Richardson & Bass' Jenkins 2, ne ne se PSL 13, blk 77, flow 562 bbls, 2-in, shot 390 qts 3280-3410 ft, td 3425 ft.

Yoakum County: Wasson—Deep Rock Oil Corp.'s Anderson 4, c sw nw sec 735, pump 102 bbls, acid 9000 gals 4995-5185 ft.

WILDCAT STARTS

Borden County—Ed McAdams and Geo. P. Livermore's W. D. Johnson 1, c sw ne T&P 35, blk 32, T-5-N, lcn 6000-ft test.

Gaines County—Argo Oil Corp.'s J. A. Morrow-Humble 1, c nw nw PSL 4, blk A-9, lcn 5500-ft test.

North Texas

Two Montague County Wildcats Showing

Two Montague County deep wildcats showing for oil producers, and new oil zone given Gant-Turner pool. Potts two-pay pool records first failure. Eastern Young County semi-wildcat has big gas yield with oil flow.

Montague County: Continental's Mueller 1, initial test for its Salona prospect, 6¼ miles east of Bowie and same distance southeast of Gant-Turner pool, flowed 262 bbls 45.8-gr oil natural in 21 hours, including 115 bbls the last 7 hours, after cleaning itself in pits. Production is from sand 7218-23 ft, 5-in liner 7200 ft, in Simpson, topped 7135 ft. Continental's Penn 1, east offset to the Gant-Turner pool 6200-ft Bend producer, established new pay and became first Viola lime producer in state, swabbed 65 bbls oil and 10 bbls water in 24 hours after recovering oil load used in acidizing with 1000 gals at 6692-6747 ft, 5-in liner at 6692 ft. The well was then treated with 7000 gals acid by jet method, and gauge delayed pending removal of cavings.

Sinclair Prairie's Jones 1, 1¼ miles northeast of Forestburg, was awaiting acid after hole filled at rate of 3 bbls 36-gr oil hourly from Basal Bend limestone 7176-7236 ft, having plugged back from Ellenburger 8630-96 ft to 7320 ft. Company's Henderson 1, 2 miles east by north of Denver failed to recover junk at 6935 ft, and prepared to set whipstock at 4810 ft.

Deep Prospects: Lou Stogner et al's Berry 1, southwestern Cooke County, tested 3000 ft brackish water with only trace oil after drilling plugs from 5½-in 5810 ft, with saturation in Ellenburger 5932-6003 ft. In Northwestern Grayson County, Robert Talbot et al's Jewell 1 tested dry after using 1000 gals acid in Bend 7178-7209 ft, having previously recovered wash water and scum dead oil from Ellenburger 8348-8403 ft.

Wichita County: Consolidated's Potts 3-D, ¼-mile east of Potts discovery, tested salt water after using acid in Mississippi 4529-57 ft.

Young County: Henry Zweifel et al's Steele 1, J. C. Vanhooser Survey, possibly southeast extension for Sewell pool, flowed 139 bbls oil 20 hours, 18/64-in tubing choke, estimated 12,000,000 ft gas daily, after acidizing casing perforations 3947-56 ft in Bend, topped 3823 ft, having tested dry in Marble Falls 4106-4412 ft.

COMPLETIONS

Archer County: Wildcats—Waldo Stephens et al's Adae 2, sw ne sw Palo Pinto CSL 8, abnd 1705 ft.

Sinclair Prairie's Sloop 1, se se nw H&TC 8, blk 1, Bend 5200 ft, abnd 5491 ft.

Clay County: Ross—Continental et al's Ross 3-A, 1417 ft from n and 440 ft from e lines sec 8, J. Wyont sur, flow 1002 bbls, ¾-in, acid 7000 gals, Bend 5424-46 and 5465-5512 ft.

Clay County—C. Y. Gorman et al's Taylor 1-C, blk 39, Bacon subdiv, abnd 1150 ft.

Cooke County—Walnut Bend-Sinclair Prairie's Atkins 9, 2310 ft from w and 115 ft from n lines blk 59, Fannin CSL, flow 476 bbls, 2-in, sand 4930-36 ft.

Montague County: Benton-Holmes — Pace Pet. Co.'s Fischer 1, swc tr, n½ John Reese sur A-21, abnd granite wash 3964-98 ft.

Montague County: Benton (new pay)—Sinclair Prairie's Benton 2, 330 ft from n and 1263 ft from w lines 120-ac tr, T. R. Jackson sur, flow 989 bbls 42.5-gr, 2-in, acid 1500 gals Strawn perf 4535-47 ft, pb from Ellenburger 5175-5210 ft.

Montague County: Chapman-McFarlin — Stanolind's Germany 1, 330 ft out swc sec 89, blk 5, Chas. Lockhart sur, Ranger 2804 ft, Bend 5588 ft, Simpson 5840 ft, Ellenberger 6101 ft, abnd 6217 ft.

Montague County: Stoneburg—Continental's J. F. Yowell 1, c n½ se ne Limestone CSL 8, Bend 5986 ft, Viola 6386 ft, Ellenberger 7000 ft, abnd 7224 ft.

Wichita County: K-M-A Ellenburger—E. C. Oil Co.'s Mangold 5-A-E, 467 ft from w and 615 ft from n lines blk 35, P. Castleman sur, flow 1528 bbls natural, 2-in, 4309-40 and 4345-84 ft.

Lewis Prod. Co.-Selby O&G Co.'s Mangold 10-E, 606 ft from s and 467 ft from w lines blk 36, P. Castleman sur, flow 824 bbls, 2-in natural, 4282-4343 ft.

Wichita County: Wildcat—C. F. Schram et al's Thompson 1, 700 ft out nwc of L. Lapolaum sur A-728, abnd 670 ft.

WILDCAT STARTS

Archer County—Bridwell Oil Co.'s A. B. Edwards 1, 330 ft from n and 990 ft from e lines blk 14, Geo. Bruner sur, 3½ mi nw Scotland, lcn.

Childress County—M. F. Williams et al's Thomas 1, c sw sw W&NW 452, blk H, 1⅛ mi sw Kirkland, lcn 6000-ft test.

Clay County—F. H. Gohlke et al's Householder 2-B, 330 ft out swc n½ sec 30, Byers subdiv, lcn.

W. H. Spradling et al's Taylor-Elliott 1, 2000 ft from s and 636 ft from w lines sec 56, Bacon subdiv, lcn.

Stayton Oil Co.'s Turner 2, 1137 ft w and 1318 ft s of nec sec 55, Specht-McCutchin sur, lcn.

Jack County—Hanlon & Buchanan's Griffin 1, 495 ft out nwc sw SP sur A-579, sd for rotary 680 ft.

Wichita County — C. C. Peters & Fred Browning's Edmonson 1, 434 ft from w and 600 ft from n lines blk 14, Red River VFL-Sam Anderson sur A-3, lcn.

Wilbarger County—Consolidated Oil Co.'s Ancell 1-R, near c nw se H&TC 34, blk 6, mile nw Potts pool, lcn.

TEXAS PANHANDLE

COMPLETIONS

Gray County—Phillips' Baer-Pan 5-A, I&GN sec 126, blk 3, pump 156 bbls, shot 220 qts 3242-83 ft.

Hutchinson County—Phillips' Whittenburg 64, H&TC 63, blk 46, pump 117 bbls, shot 350 qts 2679-1761 ft.

Wheeler County—Smith Bros. Ref. Co.'s Johnson 12, H&GN 34, blk 24, abnd 2470 ft.

West Central Texas

Western Coleman County Wildcat Sprays Oil

Western Coleman County wildcat sprays oil after nitro shot, and first try for Bend production in Jim Ned pool fails. Confirmation test for Mississippian pool, Stephens County, misses big gas in upper pay.

Coleman County: Jas. Ellis and Fred Estes' Bridges 1, 1¾ miles southeast Talpa, rated 1,500,000 gas with oil spray while cleaning out from nitro shots at 3385-3410 and 3293-3330 ft after testing dry in Bend 3585-3656 ft. J. T. Baran et al's Whittington 1, wildcat, entered Bend at 3595 ft, and drilling dry lime 3610 ft. Holland & Huffman's Bailey 1, recent discovery, pumped 104 bbls initial after acidizing Marble Falls at 2709-93 ft. Lewis Production Co.'s Bush 1, Jim Ned pool, proved dry in Bend at 4112-4270 ft, and testing after acid treatment through perforations 3590-3610 ft.

Stephens County: Texas Pacific Coal & Oil Co. and Sinclair Prairie's Connell 1-A, offset to Donnell pool's Mississippian oil producer, logged gas show 3890-3900 ft and drilling shale 4150 ft having

missed the main gas zone. Christi Bros.' Sallie Donnell 1, same area, drilling 3710 ft.

Taylor County: Clark & Cowden's Danse 1, wildcat, abandoned 2790 ft, and Medders et al's Moore 1, mile south Blair, deepening after casing off water at 3085 ft.

COMPLETIONS

Brown County—D. C. Snellers and Central Gas Co.'s Smith 1, 2200 ft from nw and 10,900 ft from sw lines John S. Thom sur 53, 1,000,000 gas, acid 4000 gals 1484-1580 ft.

Coleman County—Albert Adkisson et al's Barton 1, jkd 1570 ft.

WILDCAT STARTS

Jones County—Ungren-Frazier et al's Blount-Haynes 1, 2090 ft from s and 330 ft from e lines 345-ac tr, Henry Millard sur 243, lcn.

Parker County—W. K. Jones et al's Guss Darnell 1, c nw nw T&P Ry 173, A-1363, lcn 6500-ft test.

Shackelford County—R. H. Roark et al's W. H. Green 1, c sw sw sec 1, B. O. A. Lands, lcn 4500-ft test.

East Texas

Opelika Workover Makes Prolific Distillate Flow

Offset to Concord pool discovery yields water in Woodbine. Worked-over deep failure in Opelika field makes prolific distillate flow. Henderson County deep prospect dry in Trinity.

Anderson County: Magnolia's Kelly 1, 1500 ft southwest of its Concord pool discovery, resumed drilling to explore Woodbine section after recovering salt water on drill stem at 4548-79 ft, elevation 552 ft, being about 75 ft low in topping Woodbine at 4548 ft.

Henderson County: Texas Co.'s Brown 1, wildcat is awaiting orders after finding Trinity barren to 8360 ft. Lone Star et al's Lewis 2, northwest outpost in Opelika field and originally abandoned by former owners, deepened 6 ft to 8471 ft, where pipe set on bottom, then flowed 829 bbls distillate on 37-hour gauge, acidized 5000 gals through perf 8338-52 and 8417-33 ft.

Deep Prospects: Texas Co.'s Keeling 1, Limestone County, was coring unidentified formation 5750 ft. In Cherokee County, Humble's Curtiss 1 drilling 7060 ft, and American Liberty Oil Co.'s McNatt 1, Hunt County, entered Travis Peak 4465 ft, and drilling 5310 ft.

COMPLETIONS

Navarro County: Corsicana-Powell—Guy Sitton et al's Pugh 5, 42-ac tr, J. Smith sur, abnd 1555 ft.

Rusk County: New Salem—H. H. Groneman et al's Dublin Grocery 1, 140-ac tr, J. I. Sanchez sur, elev 387 ft, abnd 3010 ft.

L. O. McMillan et al's Heath 1, 80-ac lse, J. I. Sanchez sur, elev 379 ft, abnd 2936 ft.

Wood County: Hawkins—W. W. Bradley et al's Snider 1, 467 ft out nwc 79-ac lse, J. P. Moseley sur, flow 338 bbls ¼-in, Woodbine perf 4765-85 ft, td 4912 ft.

Humble's L. A. Bryan 7-B, 1286 ft from s and 467 ft from e lines 202.98-ac lse, M. A. Esparcia sur, flow 357 bbls, ¼-in, perf 4800-06 and 4884-89 ft, td 4903 ft.

Humble's J. T. Green 2-B, 160.22-ac lse, H. E. Watson sur, flow 443 bbls, ¼-in, perf 4463-67 and 4482-97 ft, td 4601 ft.

Humble's T. C. Snow 3, 467 ft from s and 495 ft from e lines 118.97-ac lse, Wm. Herrington sur, flow 443 bbls, ¼-in, perf 4656-66 and 4812-20 ft, td 4870 ft.

Humble's S. H. Moore 3, 500 ft from n and 467 ft from e lines 140.91-ac lse, J. Pollock sur, flow 400 bbls, ¼-in, perf 4702-07 ft, td 4845 ft.

WILDCAT STARTS

Angelina County—Coastal Refineries, Inc.-E. B. LaRue's Henderson 1, near center John Watson sur, dr 250 ft.

Kaufman County—Brown-Hancock Oil Co.'s Warren 1, 660 ft from ne and 2330 ft from se lines of 163-ac tr, J. C. Moses sur, mim Woodbine test.

Southwest Texas

Jackson County Successes Keeps Area in Spotlight

Gulfboard Oil Corp.'s discovery southeast of Ganado, Looney's Branch extensions and other Jackson County successes kept this area in the spotlight of Southwest Texas activity.

Jackson County: Gulf's Simons 2, south of Texana field, cored series gas/condensate sands below 5600 ft, now dr below 6500 ft. All new zones for region.

Lavaca County: Shell's Neuhaus 2, 2667 ft sw disc at Provident City, logged oil shows in Wilcox to 8880 ft and testing. Would be field's second well.

San Patricio County: Odem field rapidly becoming most active in Southwest Texas as more operators enter play.

SOUTHWEST TEXAS

COMPLETIONS

Duval County: Wildcats—Atlantic's J. F. Welder (Martex) 1, sec 221, 3 mi w Fitzsimmons field, abnd 3871 ft.

John F. Camp & Son's Dunn 1, Diego de Hinojosa gr, abnd 4513 ft.

Jim Hogg County: Colorado—Humble's King-Colorado 67-B, Las Moretas gr, 80.64 bbls 46.5-gr, 3/16-in, 120 lbs tp, 380 lbs cp, gas/oil ratio 335/1, sand 3128 ft, 4½-in 3124 ft, td 3134 ft.

Sun's East 4-B, lot 10, Las Moretas gr, 86 bbls 47-gr, 3/16-in, 100 lbs tp, 625 lbs cp, gas/oil ratio 400/1, sand 2971-74 ft, td 2974 ft.

Starr County: Wildcat—Sun's B. G. de Garcia 1, sh 5, Por 98, 1 mi se Garcia field, abnd 4506 ft.

WILDCAT STARTS

Duval County—Bridwell Oil Co.'s Reyes 1, 2570 ft n, 1779 ft w lines of sur 513, 9 mi e Freer, 4100-ft test.

Starr County—D. C. DeWitt's F. S. Guerra 1, 660 ft ne and nw lines lot 22, Clark sub, tr 5, por 100, 1800-ft test.

LOWER GULF COAST

COMPLETIONS

Bee County: S. Caesar—Jay Simmons' U. Cotton 1, Powell sur, 1/3 mi se outpost, abnd 6593 ft.

Bee County: Wildcat—Tide Water's I. Hall 1, Williams sur, 2 mi nw Tuleta, abnd 7881 ft.

Bee County: Discovery—Ike Howeth's Harris 1, blk 7, Burke ranch, C. Rivas gr, 9 mi nw Beeville, 3000 gas and 15 bbls 43-gr oil, ⅛-in, 1400 lbs equalized pressure, perf 3737-39 ft, sand in Vicksburg 3731-40 ft, td 4714 ft.

Jackson County: Lolita—Cox & Hamon's H. Mitchell 1, Austin lge, 69 bbls 26-gr oil plus 66-2/3% salt water, 12/64-in, 270 lbs tp, cas sealed, gas/oil ratio 134/1, perf 5296-97 ft, td 5955 ft.

Shell's Mitchell 1, Austin lge, 125.47 bbls 26-gr, ⅛-in, 550 lbs tp, 950 lbs cp, gas/oil ratio 280/1, sand 5286 ft, 4½-in, 5285 ft, td 5292 ft.

Jackson County: N. LaWard—Phillips' Johnson 7, blk 179, 75.68 bbls 25.5-gr, 3/32-in, 1050 lbs tp, 1950 lbs cp, gas/oil ratio 1685/1, perf 5197-5203 and 5207-14 ft, td 5271 ft.

Jackson County: West Ganado—Pure's D. Weise 3, Menefee sur, 96.16 bbls 25-gr, 8/64-in, 420 lbs tp, cas sealed, gas/oil ratio 268/1, perf 4745-68 ft, td 4850 ft.

Jackson County: West Ranch—Magnolia's West 224-A, R. Musquez gr, 138.16 bbls 31.5-gr, 7/64-in, 800 lbs tp, 1015 lbs cp, gas/oil ratio 413/1, perf 5736-40 ft, td 5750 ft.

Jackson County: Discovery—Gulfboard Oil Corp. et al's J. H. Harmon 1, A. Kountz sur No. 23, 1½ mi se Ganado field, 104.14 bbls 28.8-gr, 5/32-in, 350 lbs tp, cas sealed, gas/oil ratio 436/1, perf 5360-74 ft, sand 5353-62 ft, broken sand 5362-79 ft, just below Marginulina-Frio contact, td 6716 ft.

Jim Wells County: Agua Dulce—Sam E. Wilson et al's San Antonio Land Bank 3-A, condensate well for recycling plant, perf 6635-75 ft, td 6765 ft.

Kleberg County: Seeligson—Humble's Knig-Cabeza 1, sec 50, ne outpost, junked 2028 ft, crooked hole.

Kleberg County: Stratton—Humble's King-Paso Ancho 11, L. Rivas gr, 143.29 bbls 43.6-gr oil, ⅛-in ch, 750 lbs tp, 650 lbs cp, gas/oil ratio 705/1, sd 6589 ft, 5½-in, 6599 ft, td 6635 ft.

Nueces County: Agua Dulce—Republic Nat'l Gas Co.'s Pfluger 1, sec 186, outpost, 147 bbls 41.3-gr, 7/64-in, 1195 lbs tp, 1475 lbs cp, gas/oil ratio 857/1, perf 7077-80 ft, td 7107 ft.

Nueces County: Wildcat—Phillips' Molena 1, lot 14, Villareal gr, 2 mi sw Corpus Christi, abnd 6005 ft.

Nueces County: London—Seaboard's Lehman 1-C sec 25, 1½ mi sw field, abnd 7025 ft.

Willacy County: Wildcat—Baldridge & King's Berndt 1, lot 61, Engelman sub, 6 mi se Raymondville, abnd 8009 ft.

WILDCAT STARTS

Hidalgo County—Seaboard's Boston-Texas 1, 13,300 ft e, 15,600 ft s lines Los Guages gr, 5 mi w McCook, 7500-ft test.

Live Oak County—Brewer & Hixon's F. W. Jones 1, 1980 ft e, thence 660 ft s of ne cor of Kivlin sur, but in AB&M sur 271, 2 mi s Clareville, 4400 ft test.

Nueces County—Las Tecas Pet. Co.'s Julfka Unit 1, 510 ft s, 871 ft w of ne cor E. R. Oliver sur No. 496, 2 mi sw Clarkwood, 6500-ft test.

SOUTH CENTRAL TEXAS

COMPLETION

LaSalle County: Wildcat—L. V. Chenoweth's fee 1, L. Menchaca sur, 6 mi ne Los Angeles, abnd 5504 ft.

WILDCAT START

Bexar County—V. E. Nicholson's Bonocsky 1, 910 ft sw, 660 ft se lines 129.8-ac lse, Wm. McNuner sur, 2½ mi e Adkins, 1500-ft test.

Texas Gulf Coast

Oil Showings Found in Grimes County Wildcat

Showings found in top of Wilcox in Grimes County wildcat; Stanolind making more tests on Chocolate Bayou extension well; wildcat locations show increase.

Grimes County: Cockburn Oil Corp. is coring around 8400 ft in Gayle 1, deep Wilcox wildcat in Stewart survey, south of Plantersville, after topping Wilcox at 7350 ft which showed stringers of oil-bearing sand. Operators will core solid to 8500 ft or deeper. Presence of stringers in top of section has increased interest in this portion of Wilcox trend, as not many deeper tests have been drilled in the area.

Wilcox Trend: In Deering Creek area of Montgomery County, Superior is drilling below 11,400 ft in McMahan 1. Although no details have been released, operators ran electrical log to 10,650 ft, and the well is reported not to be running too favorably with other deep tests in area. Superior has spudded Frost 1, in East Lake Creek area, and set conductor pipe. This will be a deep Wilcox test.

Brazoria County: Stanolind is continuing production tests in Houston Farms 1 in Chocolate Bayou area. Pipe was perforated at 11,476-523 ft, flowing gas and some water but no oil. However, a deep sand section was encountered at this level and perforations have been squeezed for further tests. Well is west of production in Hooper & Wade survey, Section 3. Hole is bottomed at 11,803 ft with 5½-in cemented at 11,534 ft.

Damon Mound: First activity in Damon Mound area in some time is projected with W. M. B. Oil Co. preparing to drill Wisdom 1, 5000-ft flank test on 393-acre tract in A. Darst survey. It is reported four other tests will be drilled on the flank other than the one already projected.

Wildcats: Wildcat activity showed an increase last week with two tests announced for Brazoria County and one for Liberty County. Humble will drill Houston Farms 2 in Rattlesnake Mound area, Brazoria County. Projected to 7500 ft, location is on a 7000-acre tract in T. W. Lyles survey, and is 3½ miles northeast of their Houston Farms 1 dry hole. Humble also is starting Houston Farms 1 in Hall's Bayou area, Brazoria County. Planned as a 11,500-ft

test, it is 2 miles south of Strake's deep hole which blew out and flowed some oil on production tests before abandonment. Location is on 5000-acre block in Perry-Austin survey 2.

COMPLETIONS

Chambers County: Fig Ridge—Texas Co.'s Broussard 7, 3150 ft fr e & 1980 ft fr s l HTB 94, perf 8550-70 ft, flow 610 bbls, ¼-in, tp 1025, td 8600 ft.

Grimes County: Wildcat—Magnolia's Brigance 1, 933-ac tr R. Ray sur, Wilcox 4460 ft, abnd 8862 ft.

Jefferson County: Wildcat — Stanolind's Davidson 1, Big Hill area, 160-ac tr TNO 173, abnd 10,114 ft.

Newton County: Wildcat—Kirby Petroleum Co.'s Muldoon 1, Bon Weir area, 40-ac unit J. Delaney sur 105, Cockfield 5713 ft, Wilcox 5712 ft, abnd 9270 ft.

Waller County: Katy—Stanolind's Young 2, 660 ft fr e & 1834 ft fr s l 454-ac tr, T. S. Reese sur 124, pipe slotted 7125-41 ft, 7159-71 ft, 7183-7203 ft, 7207-39 ft, dry gasser, shut in, td 7292 ft.

Wharton County: Withers—F. W. Michaux' Pierce Est. 22, 2253 ft fr se l Thomas Westall sur 65, flow 125 bbls, 10/64-in, tp 400, cp 500, gor 259/1, td 5400 ft.

F. W. Michaux' Pierce Est. 27, 3187 ft fr se l Charles Howard sur, flow 200 bbls 10/64-in, td 5400 ft.

F. W. Michaux' Pierce Est. 48, 5053 ft fr se l Thomas Westall sur 65, perf 5302-10 ft, flow 168 bbls, 10/64-in, tp 525, cp 475, gor 320/1, td 5355 ft.

F. W. Michaux' Pierce Est. 59, 4120 ft fr se l Charles Howard sur, flow 179 bbls, 10/64-in, tp 775, cp 1000, gor 358/1, td 5390 ft.

F. W. Michaux' Pierce Est. 95, 5120 ft fr se & 6910 ft fr ne l 4040-ac tr A. H. Pierce sur 642, flow 75 bbls, ⅛-in, tp 410, gor 139/1, td 5545 ft.

WILDCAT START

Jefferson County—Stanolind's Fitzhugh 3, south flank Big Hill dome, 1600 ft fr s & 990 ft fr w l 320-ac tr William Faddin sur, lcn 8750-ft test.

Louisiana Gulf Coast

Deeper Sands Opened at University, West Gueydan

New deep sand opened in University field. Deeper production at West Gueydan. Big producer completed at Paradis.

East Baton Rouge Parish: Sugarfield Oil Co. has completed Victory 1 to establish a deeper horizon in the University field. Perforated at 9400-03 ft, the well flowed 229 barrels 40.4-gr oil through 9/64-in choke, tubing pressure 2040 pounds, casing 2330 pounds, gas/oil ratio 1438/1.

Vermilion Parish: Pure Oil Co. has opened new production on the north flank of West Gueydan dome with Vermilion Irrigation Co. 2 producing from Miocene. Perforated at 10,783-92 ft, well flowed 10 barrels per hour through 16/64-in choke, tubing pressure 2125 pounds, casing 2200 pounds. Operators have been making several tests on different chokes in order to reduce gas/oil ratio, being 29,000/1 on last test. A ⅜-in choke was installed at 5000 ft, total depth being 11,000 ft.

St. Charles Parish: Humble has completed what is believed to be the largest well ever drilled in the Paradis field. On initial Manufacturers Record Publishing Co. 4 flowed 40 barrels per hour through ¼-in choke from perforations at 10,220-230 ft in Miocene, gas/oil ratio 820/1. Total depth is 10,263 ft. Humble's Manufacturers Record 3 is about ready for testing, having drilled to around 11,000 ft.

St. James Parish: First wildcat activity in St. James Parish in several months is scheduled with Humble planning to drill in the Convent field area in townships 12 and 13 south, ranges 16 and 17 east. Convent field proper was discovered in 1938 by Continental, and several dry holes have been drilled in area since.

COMPLETIONS

Calcasieu Parish: Hayes Discovery—Gulf's Calcasieu National Bank 2, 330 ft s & 1130 ft e nw cor se sw 18-11s-5w, perf 11,646-70 ft, flow 55 bbls 48-gr, 3/16-in, 4,000,000 gas, tp 4250, gor 53,700/1, td 11,578 ft.

Cameron Parish: Cameron Meadow—Magnolia & Humble's Cameron Meadow 38, 1980 ft s & 2264 ft e nw cor 21-14s-13w, abnd 4774 ft.

Cameron Parish: Creole—Superior & Pure's State-Gulf of Mexico 11, 8600 ft s & 2400 ft w of se cor 4-15s-8w, abnd 9007 ft.

Evangeline Parish: Ville Platte—Continental's Martha Haas 9, 1550 ft nw & 1350 ft sw e cor 44-3s-2e, perf 10,170-210 ft, acidized 1000 gals, flow 216 bbls 41-gr, 16/64-in, gor 1490/1, 10,270 ft.

Jefferson Parish: Lafitte—Texas Co.'s Madison Realty 12, 5904 ft n & 344 ft e sw cor sec 20 in sec 17-17s-24e, perf 10,020-50 ft, flow 281 bbls 5/32-in, 10,204 ft.

Plaquemines Parish: Bastian Bay—Phillips' Fasterling 1, center ne nw 47-20s-29e, perf 9013-22 ft, flow 169 bbls 34-gr, 3/16-in, gor 3497/1, 10,024 ft.

Plaquemines Parish: Grand Bay — Gulf's Grand Prairie Levee Dist 18-A, 1458 ft n alg w l sec 5 fr sw cor, and 1012 ft e at ra in 5-20s-19e, perf 8418-28 ft, flow 357 bbls 5/32-in, tp 1450, 8430 ft.

Plaquemines Parish: Lake Hermitage — Gulf's LaFourche Levee Dist 14, 2350 ft n & 2700 ft e of sw cor sec 11-18s-25e, abnd 5505 ft.

St. Charles Parish: Lake Salvador—Texas Co.'s State-Lake Salvador 12, 14,790 ft n & 19,631 ft w of USCGS "Mon" in lake T-16s-22e, perf 9915-24 ft, flow 389 bbls 3/16-in, gor 1437/1, td 10,250 ft.

St. Charles Parish: Paradis—Texas Co.'s LLE-Paradis 21, 4620 ft e & 660 ft s of nw cor 8 in 39-12s-20e, perf 10,324-348 ft, flow 519 bbls 3/16-in, tp 1800, 10,443 ft.

Texas Co.'s LLE-Paradis 24, 1981 ft n & e of sw cor 5-14s-20e, perf 10,390-420 ft, flow 422 bbls 3/16-in chk, tp 1650, gor 680/1, td 10,420 ft.

St. Martin Parish: West Lake Verrett—Shell's Jeanerette Lumber & Shingle 10, 15-14s-12e, perf 11,475-84 ft, flow 278 bbls 31.9-gr 14 hrs, 3/16-in, tp 3250, gor 5925/1, td 11,500 ft.

Shell's Jeanerette Lumber & Shingle 11, 990

The OIL WEEKLY'S TRADING POST

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■ ABOUT 3,000 acres of oil leases open to drill for acreage, good possibilities. Philo Dempsey, Roosevelt, Oklahoma.

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Trading Post Section, THE OIL WEEKLY
P. O. Box 2608 Houston, Texas

ft n & 330 ft e of sw 10-14s-12e, abnd 2374 ft.

St. Mary Parish: Bayou Sale—Atlantic's St. Mary Parish Land Co. 3, begin ne cor sec 41, go 1690 ft w alg line of T-17s, thence s 1420 ft to lcn in 41-17s-9e, perf 10,703-30 ft, flow 31 bbls 3/16-in, gor 40,000/1, td 12,421 ft.

Atlantic's St. Mary Parish Land Co. 5, 3370 ft w & 2275 ft s of ne cor 41-17s-9e, perf 10,742-50 ft, flow 34 bbls, ⅛-in, tp 3800, gor 47,000/1, td 11,816 ft.

St. Mary Parish: Charenton—George Franks' Veeder-Hunt 1, 400 ft e & 1450 ft n of sw cor sw 30-14s-10e, perf 3066-76 ft, pump 10 bbls, td 4101 ft.

St. Mary Parish: Horseshoe Bayou—Texas Co.'s St. Mary Parish Land Co. 6, 467 ft s & 743 ft w of ne cor 23 in 37-17s-9e, perf 11,295-320 ft, flow gas, shut in, td 12,058 ft.

Terrebonne Parish: Dog Lake—Texas Co.'s State-Dog Lake 14, 5588 ft n & 1838 ft w of se cor 31 in Hackberry Lake, abnd 9485 ft in salt.

WILDCAT START

Rapides Parish—J. P. Perry's Perry & McGinty 1, 993 ft n 45 deg w fr se cor 5-4n-3e, lcn Wilcox test.

North Louisiana

Five Wildcats Started In As Many Parishes

Wildcatting took a sharp upward turn last week with locations staked for five widely separated tests. Winn Parish wildcat has gas show.

Winn Parish: H. L. Hunt's Goodpine F-24, sw se 13-12n-5w, Winn Parish, drilled to 6238 ft, with information withheld, is reported to have shown gas in several horizons, with possibly one oil show.

COMPLETIONS

Caddo Parish: Hosston-Vivian—Bayou State Oil Co.'s Brown A-2, sw se 21-22n-15w, pump 10 bbls, 1017 ft.

Caddo Parish: Pine Island—J. E. Marshall's Spell A-5, sw nw 29-21n-15w, pump 20 bbls, 1588 ft.

Transport Oil Co.'s Wilkinson 2, sw ne 22-20n-14w, abnd 976 ft.

Claiborne Parish: Haynesville — Blackwell O&G Co.'s Beene-Waller 1, ne sw 10-23n-8w, 660 bbls, 5404 ft.

Ohio's Sherman 21, Acct. 1, sw nw 15-23n-8w, flow 960 bbls, ¼-in, 5296 ft.

LaSalle Parish: Little Creek—Placid Oil Co.'s May 1, sw sw 30-9n-2e, pump 117 bbls, 2690 ft.

LaSalle Parish: Nebo—H. L. Hunt's Goodpine F-91, nw ne 28-7n-3e, pump 95 bbls, 4151 ft.

LaSalle Parish: Olla—Fred Henslee's Sills 1, se sw 23-10n-2e, abnd 2338 ft.

LaSalle Parish: Trout—H. L. Hunt's Goodpine F-100, sw ne 25-8n-2e, abnd 4878 ft.

WILDCAT STARTS

Claiborne Parish — H. L. Hunt's W. T. Owens 1, ne sw 13-23n-7w, rig.

LaSalle Parish — Carter's Catahoula Lake D-2, sw nw 22-6n-3e, mat.

Madison Parish—Continental's Watts 1, swc Coleman block, irreg. sec 40-15n-13e, rig.

Sabine Parish—Brown & Woods' Foster 1, sec 35-6n-13w, spd.

Union Parish—Ward Delaney et al's Taylor 1, se ne 12-19n-1e, spd.

ARKANSAS

COMPLETIONS

Lafayette County: Midway — Barnsdall's Roberts 3, c sw sw 14-15-24, porosity 6353-67 ft, flow 25 bbls 36.5-gr hourly, ¼-in, 6467 ft.

Union County: Mount Holly—Atlantic's Johnson 1, sw se 15-17-18, elev 270 ft, top porosity 7175 ft, oil contact, 7195 ft, flow 200 bbls, 7207 ft.

MISSISSIPPI

WILDCAT START

Pearl River County—Placid Oil Co., Southern Mineral Corp. 3, c se sw 9-2s-16w, sp.

California

Kern County Heavy Oil Discovery Confirmed

Shell Oil Co. confirms discovery of new source heavy oil production Antelope Hills area Kern County. Grapevine-Wheeler Ridge area wildcat slated. Test scheduled for Los Olivos-Gato Ridge area, Santa Barbara County.

Kern County: California's first discovery for 1942 has been made by Shell Oil Co. in Sec 6-28-20, Antelope Hills area, with completion of Williams 45-6, flowing 934 barrels net oil, 16.4-gravity, through 3-inch tubing. Production is from Temblor in Middle Miocene. Total depth is 2340 ft in oil sand with 60 ft perf landed on bottom with 3-inch tubing hung at 2268 ft, packer at 2182 ft. In addition to Shell, Continental, Texas, Chanslor-Canfield, Midway Oil Co. and Mitchell Co. have holdings in area. Location is 3½ miles west of Belridge field. Discovery was drilled on geophysical data. Estimates on probable area of productive area or indicated reserves not yet available.

Reserve Oil & Gas Co. is making preparations for another test in the Grapevine-Wheeler Ridge area, in Sec 12-10-19 on the Tejon property. Area has been extensively explored in past five years.

Santa Barbara County: Tide Water is preparing to drill in the area midway between Los Olivos-Gato Ridge on the Davis property, 33-8-31.

COMPLETIONS

Fresno County: Kettleman Hills—Standard's 343-3P, 1963 ft n, 834 w se cor 3-22-17, flow 274 bbls 50-gr, 24/64 bean, 285 ft perf 10,173 ft, Temblor 6448 ft, Bentonite 6398 ft, Eocene 9865 ft, td 10,175 ft.

Fresno County: Raisin City—Shell's SA & FL 33-19, 1663 ft s, 1584 e nwc 19-15-18, flow 299 bbls 23.9-gr, 16/64 bean, 275/175 lbs, perf 5029-5044 ft, td 5245 ft.

Kern County: Belridge South—Union's Hopkins 85-4, 330 ft s, 330 w e¼ cor 4-29-21, pump 15 bbls 10.8-gr, perf 677-877 ft, San Joaquin clays 1125 ft, td 1444 ft.

Kern County: Coles Levee — Richfield's KCL-C 67-27, 1010 ft n, 1641 w se cor 27-30-25, flow 825 bbls 31-gr, two 1½-in beans, 70/750 lbs, 82 ft perf 9376 ft, Gray sand 9400 ft, oil sand 9307 ft, td 9547 ft.

Standard's KCL 22-43, 1649 ft s, 2437 e nw cor 31-30-25, pump 92 bbls 32.9-gr, 161 ft perf 8087 ft, td 9076 ft, pd 8990 ft.

Kern County: Edison Area—J. Paul Getty's Mattson 1, 1650 ft n, 350 w se cor 630-29, Wicker sand 4212 ft, Walker-Vedder contact 6764 ft, abnd 6764 ft.

Kern County: Kraemer Area—South Basin Oil Co.'s No. 103, 400 ft n, 2000 e sw cor 24-3-9, Pico-Puente contact 2400-2500 ft, Brown shale 4245 ft, abnd 4774 ft.

Kern County: Midway-Sunset — General's Moco 34-340, 989 ft s, 263 w e¼ cor 34-12-24, pump 24 bbls 13-gr, perf 476-572, 643-958 ft, td 959 ft.

Los Angeles County: Coyote East—Graham & Loftus' P 3, 542 ft n, 417 w se cor 13-3-10, pump 25 bbls 22-gr, perf 4075-4160 ft, td 4243 ft.

Los Angeles County: Del Valle—R. E. Havenstrite's Lincoln 10, 2305 ft n, 1624 w se cor 16-4-17, Sherman zone 6170 ft, abnd 7294 ft.

Los Angeles County: San Fernando Area—Shell's Mission 2-1, 561 ft n, 2000 w cent 25-3-16, abnd 6978 ft.

Los Angeles County: Wilmington — Simon Bernstein's Barnes Comm. 1, 363 ft s, 125 e c l Pacific Coast Highway & Wilmington Blvd, pump 150 bbls 17-gr, perf 3087-3327, 3462-3727 ft, td 3727 ft.

Ventura County: Cat Canyon—Union's Bell 14, 355 ft s, 1650 e cent 27-3-9, pump 415 bbls 16-gr, 646 ft perf 5805 ft, td 5807 ft.

WILDCAT STARTS

Kern County—Standard's No. 42-9, sec 9-28-27, lcn, Kern Front area.

Santa Barbara County—Tide Water's Davis 1, sec 33-8-31, lcn, Los Olivos area.

Michigan

Two Wildcats Rated Discoveries After Acid

Acid treating of two wildcats definitely placed each in the class of discoveries and on the basis of early performance indicate best field prospects this year.

Turner Petroleum Corp.'s Cavanagh 1, N½ SE NW 14-21n-7w, Missaukee County, which flowed 352 bbls in 17 hrs natural before 5-in casing had been set, flowed 186 bbls after setting and cementing producing string. Well flowed 60 bbls 1st hr, 56 bbls 2nd hr, after 100 gals acid treatment and was choked

No Business As Usual

Maybe you have noticed that there is no business as usual and getting more so. We are as busy as cranberry merchants — but cranberry merchants hawking red haws, maybe. No business is according to Hoyle or Culbertson or Jacoby or anybody but Nelson, which must gripe Hitler and Hirohito considerably. Unquestionably all of us feel stirring in our blood our ancestors' ingenuity for utilizing an ox for want of a horse or a hoe for want of a plow. We have revived the ancient art of beating a plowshare for husbandry into a blade for blood. But here at PELCO if a moldboard can be found that won't serve the swordmakers, maybe we can forge it into something useful to you in drilling, producing or refining oil essential to the war effort. So — TRY PELCO FIRST.

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to 16 bbls per hour, rate maintained over first 3-day test. Ohio, Gulf and Pure drilling offsets.

Treated with 1000 gals acid Sun Oil Co.'s Arndt 1, S½ SW SW 23-18n-8w, Osceola County, jumped from 32 bbls day to 288 bbls in 15 hrs and maintained average 245 bbls under choke. Sun controls area opened by discovery.

Wildcat: John B. Spitzley, trustee's Simon 1, NW NE SE 21-7n-4w, Dallas Township, Clinton County, abandoned last February after drilling Dundee lime dry at 2910 ft, has been plugged back to 2590 ft, acidized, and recompleted as a discovery producer in Traverse topped at 2481 ft. Well produced 679 bbls oil first 8 days on test, flowing under agitation up to 165 bbls. First producer in Clinton County in area almost entirely under lease to small companies.

COMPLETIONS

Allegan County: Hopkins—Fisher-McCall's Wamhoff 2, ne ne nw 18-3n-12w, Traverse 1588-90 ft, pump 95 bbls after acid, 1591 ft.

Muskegon Dev. Co.'s Schwartz 1, n½ ne sw 19-3n-12w, Traverse 1531-76 ft, abnd 1576 ft.

Allegan County: Wildcat—F. W. Kehlet's Moore 1, nw ne se 12-2n-14w, Traverse 1465 ft, abnd 1490 ft.

Allegan County: Lee — Alan Winchester's Schley 1, s½ ne nw 19-1n-15w, Traverse 1180-84 ft, abnd 1184 ft.

Allegan County: Trowbridge—John F. Burton's Waterman 2, ne se se 30-1n-13w, Traverse 1361-71 ft, 46 bbls after acid, 1371 ft.

Allegan County: Hopkins—Regal Dutch Pet. Co.'s Nicolai 1, nw se ne 18-3n-12w, Traverse 1542-45 ft, flow 100 bbls 15 hrs after acid, 1545 ft.

Bay County: Kawkawlin—Gulf's Leonard 1, s½ ne nw 3-14n-4e, Dundee 2785-2950 ft, pump 80 bbls after acid, 2966 ft.

Clare County: Winterfield—United Drillers' Tyler 1, w½ nw ne 29-20n-6w, Dundee 3805-40 ft, abnd 3841 ft.

Gladwin County: Beaverton—Sun's Wright 1, e½ se sw 26-17n-2w, Dundee 3796-3880 ft, pump 47 bbls after acid, 3880 ft.

Lake County: Wildcat—Ashby Drilling & Freeman Oil Co.'s Castlebar 1, nw nw nw 29-17n-11w, Monroe 3640 ft, abnd 3729 ft.

Missaukee County: Riverside Discovery—Turner Pet. Corp.'s Cavanagh 1, n½ se nw 14-21n-7w, Dundee 3940 ft, pay 3943-45 ft, td 3946 ft, flow 451 bbls, 61 bbls 1st hr, 54 2nd hr, after 100 gals acid, choked 16 bbls hr.

Monroe County: Deerfield — Vanco Oil & Gas Co.'s Montry 5, nw se sw 30-6s-6e, Trenton 2068-2600 ft, pump 30 bbls after acid, 2600 ft.

Osceola County: Reed City—Pure's Richards B1, s½ nw ne 19-18n-10w, Monroe 3571-3609 ft, flow 301 bbls 12 hrs, td 3609 ft.

Ohio's Gingrich 4, n½ sw nw 31-18n-10w, Monroe 3580 ft, abnd 4301 ft.

Osceola County: Evart Field Discovery—Sun's Arndt 1, n½ sw sw 23-18n-8w, Dundee 3767 ft, td 3778 ft, flow 288 bbls 15 hrs, 1000 gals acid.

Osceola County: Osceola-Evart — Taggart Bros. Co.'s Becker 8, c nw 27-18n-8w, Stray 1375-1400 ft, 2,000,000 gas, 1405 ft.

Van Buren County: Bloomingdale—George L. Kernodle's Skillman 1, nw se nw 12-1s-14w, Traverse 1273-78 ft, pump 36 bbls, 1278 ft.

WILDCAT STARTS

Arenac County—Arenac Oil & Gas Co.'s Kocot 1, ne sw nw 16-19n-4e, rig.

Clare County—Gordon Oil Co.'s State H1, s½ se ne 30-19n-4w, dr.

Crawford County—Leo S. Schrot's Lincoln 1, n½ nw sw 17-25n-1w, lcn.

Huron County—Wallace Markle's McDonald 1, ne sw ne 20-17n-14e, rig.

Van Buren County—Clapsaddle & Harris' Stanek 1, sw ne se 3-4s-14w, dr.

Muskegon Dev. Co.'s Finley 1, w½ ne ne 11-3s-16w, dr.

Wayne County — Voorhees Drilling Co.'s Otter 1, ne sw ne 18-4s-9e, dr.

Eastern States

NEW YORK

COMPLETIONS

Allegany County—Vosburg Oil Co., Green farm, Bolivar, 5 bbls, Richburg, 1334 ft.

Bradley Prod. Corp., Nobles farm, Alma, 5 bbls, Richburg, 1280 ft.

Bradley Prod. Corp., Bascom farm, Alma, 6 bbls, Richburg, 1319 ft.

N. V. V. Franchot, Murphy farm, Bolivar, 7 bbls, Richburg, 1419 ft.

Ebenezer Oil Co., Vincent farm, Scio, 8 bbls, Richburg, 1145 ft.

Lee Harder et al, Norton farm, Scio, 6 bbls, Richburg, 1380 ft.

George Oil Co., Scott farm, Alma, 7 bbls, Richburg, 1371 ft.

McEbenwood Oil Co., Lynch farm, Andover, 9 bbls, Penny, 1373 ft.

R. M. Tompkins et al, Yeager farm, Wellsville, 5 bbls, Fords Brook, 1159 ft.

L. H. Thornton et al, Fassett farm, Willing, 9 bbls, Fords Brook, 1270 ft.

Redmond & Moore, Fee farm, Clarksville, 5 bbls, Richburg, 1366 ft.

INTAKE WELLS

Allegany County — Bradley Prod. Corp., Nobles farm, Alma, Richburg, 1266 ft.

Sawyer Prod. Corp., Mix farm, Bolivar, Richburg, 1531 ft.

Ebenezer Oil Co., Vincent farm, Scio, Richburg, 1230 ft.

J. P. Herrick No. 1, Howe farm, Bolivar, Richburg, 1382 ft.

Gray Oil Co., Smith farm, Genesee, Richburg, 1421 ft.

New York Oil Co., Brown farm, Bolivar, Waugh-Porter, 1460 ft.

Scott & Sackinger, Scott farm, Bolivar, Waugh-Porter, 1434 ft.

OHIO

COMPLETIONS

Coshocton County — Mehowa Oil & Gas, Buron 1, 1.0 gas, 878 ft.

Knox County—Allen Willey, Staats 1, 0.1 gas, 2970 ft.

Loraine County—Edson & Son, Buswell 1, abnd 2448 ft.

Medina County—Ohio Fuel, Retz 1, 0.18 gas, 3431 ft.

Meigs County—Ohio Fuel, Gardner 2, 0.09 gas, 911 ft.

Downie et al, Ward 2, 0.13 gas, 797 ft.

Monroe County—J. C. Lunurgh et al, McConnell 1, 0.06 gas, 1310 ft.

Morgan County—J. T. Bowman, Fee 1, 1.12 gas, 950 ft.

Noble County—Hill Co., Gibson 1, abnd 1685 ft.

Perry County — Edward H. Everett Co., Dornbirer 1, abnd 2834 ft.

Palm Oil, Inc., Davis & Dittoe, 85 bbls & 0.05 gas, 3340 ft.

Vinton County—Henderson Oil Co., Thomas 4, abnd 702 ft.

Washington County—John Wagner et al, Smithberger 1, abnd 1050 ft.

PENNSYLVANIA

COMPLETIONS

Armstrong County—Pitts. Plate Glass Co., Wright 1, 0.06 gas, 3452 ft.

Fayette County—Lingle & Upperman, Shroyer Bros. 2, 0.1 gas, 1468 ft.

Greene County—Mfgrs. Lt. & Heat Co., Tustin 1, 0.08 gas, 3290 ft.

OLD WELL DRILLED DEEPER

Greene County—Pitts. Steel Co., Fee 1, gas, 2533 ft.

WEST VIRGINIA

COMPLETIONS

Calhoun County—Hope Natural, Bennett-Marsh 8593, gas, 2133 ft.

Clay County—Virginian Gaso. Oil Corp., Brown, Swann & Goshorn 1318, 6 bbls, 1791 ft.

Gilmer County—Blaine Engle, Davis 3, abnd 1955 ft.

Jackson County—United Carbon Co., Presley 1003, 8.72 gas, 5117 ft.

Godfrey L. Cabot, Inc., Jones 1, abnd 5330 ft.

United Carbon Co., Perkins 995, 3.08 gas, 5210 ft.

Kanawha County—Godfrey L. Cabot, Chartiers Oil Co., 1.5 gas, 5263 ft.

Godfrey L. Cabot, Putnam Co. 31, 0.44 gas, 5064 ft.

So. Penn. Nat. Gas Co., Ray Salyers 2, 0.25 gas & 20 bbls, 1564 ft.

Putnam County—Teavee Oil & Gas Co., Hodges 1, 0.28 gas, 1055 ft.

Upshur County—Cumberland & Allegheny Gas Co., Colerider 318, 0.18 gas, 2268 ft.

OLD WELL DRILLED DEEPER

Lincoln County—Huntington Dev. & Gas Co., Sweetland Land & Mining Co. 1, 0.04 gas, from 2116 to 3272 ft.

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JACK WHITE, Operator

Men in the Industry's News

KENNETH S. FERGUSON, Midland district geologist for Shell Oil Company, is chairman of a joint War Effort Committee formed by the West Texas Geological Society and the Permian Basin Engineers Association. Committee also includes C. D. Vertrees, Midland geologist for Continental Oil Company, and Ed A. Wahlstrom, chairman of Goldsmith Pool Engineering Committee. Objectives are to aid each technical man in finding the place in which he can best serve in the armed forces of the nation, or as a civilian; recording of qualifications and experiences of technical men in seeking such assignments; cooperate with national technical and scientific organizations in supplying needed manpower.

R. R. HOBSON, general manager of Houston Oil Company of Texas, received his 40-year gold service button May 16. The button is the first to be awarded by the company. Hobson started with Higgins Oil & Fuel Company in 1902, the company being taken over by Houston Oil Company.

B. E. BALDWIN, Tidal Pipe Line Company, has been transferred from Conroe to the company's offices at Tulsa.

W. A. SCHAEFFER, JR., production engineer for Shell Oil Company, has been transferred from New York to Houston.

HUGH ELEY, geologist for Magnolia Petroleum Company in West Texas the past two years and former assistant departmental head at University of Oklahoma, died May 10 at Dallas, where he was being treated for a tropical fever contracted recently while residing at Midland.

JOHN A. NICHOLS, West Texas district land man for The Texas Company, has been transferred from Midland to Fort Worth, where he will be assistant division land man. E. W. Statton, formerly stationed at Pampa and more recently at Fort Worth, succeeds Nichols at Midland.

C. H. SAMPLE, geologist and paleontologist of Houston Oil Company of Texas, was the guest speaker at the May 14 meeting of the Houston Derrick Club. He presented a paper on "Micropaleontology—Past and Present."

T. RIEBER, former chairman of the board of The Texas Corporation, was elected president of Barber Asphalt Corporation, New York, last week, succeeding Frank Seamans who had been with the company 50 years.

L. W. KEMP, Texas historian and department head of The Texas Company, Houston, last week was principal speaker before the San Jacinto Chapter of the Sons of the Republic of Texas. H. R. Cullen was elected to a life membership.

VAN D. BENNETT, former sales engineer for Bethlehem Supply Company at Houston and previously an engineer for several oil companies in the Mid-Continent, is now a lieutenant with the 331st Army Engineers.

JERRY SADLER, member of the Texas Railroad Commission, last week made application to become a private in the United States Army. Sadler, who has served 3½ years on the commission, said outcome of his physical examination would determine whether he would resign his position.

CLARK MILLISON, Tulsa consulting geologist, addressed the Houston Geological Society May 14 on "A Summary of Present Development in Illinois." The talk was illustrated with colored slides.

TOM BROWNFIELD and T. R. Armstrong, Standard Oil Company of New Jersey, New York, are on an extended field trip and expect to visit Ilinois, the Mid-Continent and the coastal areas.

JOSEPH E. KELLER, Washington attorney specializing in petroleum and radio law, has been appointed a consultant on state barriers to the Office of Defense Transportation. Keller will deal principally with problems affecting the interstate movement of oil and other liquids needed in war production.

LEO D. COADY, assistant manager of the crude oil purchasing division of The Atlantic Refining Company, Philadelphia, since his transfer from Dallas district office in 1937, has been made general manager of the department.

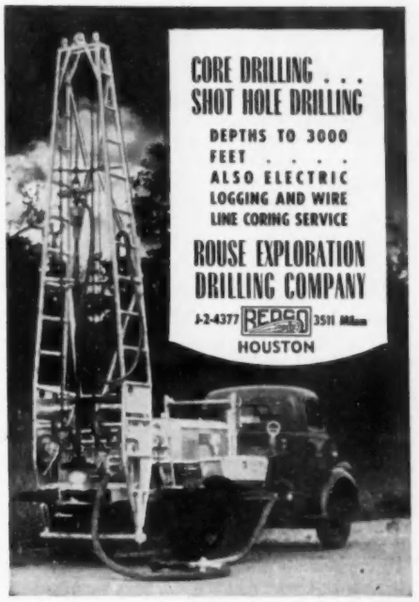
AL J. POWERS, southwestern manager of tubular sales division of Wheeling Steel Corporation with headquarters at Fort Worth, has resigned to join the U. S. Maritime Commission, Washington, as an expediter of war production.

DELMORE L. COBB, 65, secretary-treasurer of Lone Star Gas Company and an employe for 33 years, died May 9 at his Dallas residence. He was a graduate of the Southwestern University, Georgetown, Texas, and was with Navarro Oil & Refining Company, Corsicana, for 10 years before joining Lone Star at its inception.

GAIL E. SPAIN has been appointed vice president, and John Q. McDonald has been promoted to general sales manager of Caterpillar Tractor Company, Peoria, Illinois. Spain, who has been general sales manager since November, 1940, succeeds the late D. G. Sherwin and will move to the company's San Leandro, California, office to direct activities there and coordinate operations with those in Peoria. McDonald has served as export sales manager since May, 1940. A native of

G. E. SPAIN

J. Q. McDONALD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T. J. BETTES COMPANY

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HOUSTON, TEXAS

Lompoc, California, and a graduate of the University of California, he served throughout World War I commissioned as a pilot in the U. S. Army Aviation Corps.

J. D. Fletcher, vice president, will take over the active direction of export sales in addition to his duties as head of the export department.

The board of directors took action to place on the board C. O. G. Miller of San Francisco, to fill the vacancy left by the recent death of John A. McGregor.

AAPG Issues Book on Petroleum Discovery Methods

The American Association of Petroleum Geologists, Box 979, Tulsa, has issued a report of a symposium on "Petroleum Discovery Methods" conducted by the research committee of the AAPG, April 1, 1942, at Denver, Colorado.

The 164-page book represents a cross section of opinion of the geologists and engineers in the petroleum industry who are charged with maintaining reserves. The research committee, with A. I. Levorsen as chairman, sent out a letter to more than 500 members and associates of the AAPG, asking the following question:

"Granted the premise of a satisfactory price; thinking of the problem from a broad point of view; and considering all of the modern techniques of geology, physics, chemistry, and engineering, which of the current methods or combination of methods, applied to oil exploration, do you regard as offering the most promise in maintaining an adequate oil and gas discovery rate in the foreseeable future? Which of the lesser ideas, techniques, or methods do you believe are of most significance and of increasing usefulness as guides to oil prospecting? In other words, what in your judgment is the best approach to the problem of oil and gas discovery?"

The individual replies are presented in alphabetical order without comment in the symposium.

Squeaks from the Bull Wheel

Hare, Hare

Do you know what the little rabbit said as he rushed out of the burning forest?

"I've been deferred!"

Born That Way

"Mammy, who lives in this beautiful home?"

"Kunnel Roberts live here."

"Colonel in which army?"

"He ain't kunnel in no army—he's jes a nachel bawn kunnel."

Maybe So

Joe: What would you do if that good-looking salesman waited on you while you were buying underwear?

Mae: I think I would have a fit.

No Comeback

Miss yo' train, miss?

My man, why do you say "your train," when you know it belongs to the railway company?

Dunno, miss. Why does youall say "my man," when youall know Ah belongs to my wife?

What?

"Why don't you arrest that nudist colony that is disgracing this neighborhood?"

"I would, but it's awful hard to get anything on them."

Tell Tale Evidence

"That boy has taken money from my pocket."

"Henry, how can you say that? Why, it might have been me!"

"No, my dear, it wasn't you. Some was left."

Nothing to It

"They say brunettes have sweeter dispositions than blondes."

"That's hooey. My wife's been both and I can't see any difference."

Surprise

"I hear you had a wrestling match with the sergeant. What happened?"

"Well, I decides to surprise him, so I jumps at him and grabs his wrist like this, and jerks his neck like this, and twists his arm like this, and before he knows what hits him—I'm flat on my back."

Deciding Factor

"I never thought you'd marry that man."

"Neither did I, my dear. I hated his ways, but adored his means."

Full Equipment

Mistress—"Did Rastus give your friend Eliza an engagement ring to seal their betrothal?"

Mandy—"He don better'n dat, ma'am. He done give her a 'gagement wringer to go with her washin' machine."

Free Speech

Hitler was interviewing his troops and stopped to talk to one private.

"How are things with you?"

"Oh, I can't complain, sir."

"I'll say you can't."

Pacifist

"And you call yourself a peace-loving man?"

"I do."

"Even after you slugged Casey on the jaw?"

"Yes, your Honor. I never saw Casey so peaceful as just after I hit him."

War Is——

"I want to drive downtown with you today to do a little shopping."

"I see your strategic plan. The drive is to be followed by a counter-attack."

Explained

"Why are all the men in the front rows baldheaded?"

"Because they bought their tickets from scalpers."

Accidents

"A large percentage of accidents occur in the kitchen."

"Yes, and what's worse, we men have to eat them and pretend we enjoy them."

Technical

"Have you any children?"

"Yes, six—all in the cemetery."

In due time, the children returned from the cemetery, where they had been sent to play, but it was too late to annul the lease.

Thirst

Some men thirst after fame, some after love, and some after money."

"I know something they all thirst after."

"What's that?"

"Salted peanuts."

Gotkool
WATER CANS
& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
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WATER COOLER
GOTKOOL
WATER COOLER
Made in 2, 3, 5, 8, 10, 15 and 20 gallon sizes.
GOTKOOL WATER CAN
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

Notes for the Equipment Buyer and User

Tubing Hooks

BYRON JACKSON COMPANY

Byron Jackson Company, Los Angeles, has announced a completely new line of hooks, designed exclusively for handling tubing—consists of BJ "75"—"50"—and "30" tubing hooks, each number designating the rated capacity of the hook, with a safety factor of four based upon the ultimate strength of the material.

BJ Tubing Hooks

Both the 50-ton and 75-ton hooks are of the "combination" design described below. The 30-ton hook is made with a single hook body only and is furnished with a swivel lock. It is not equipped with relief springs, a heavy-duty ball bearing being sufficient to carry the loads imposed upon it.

In both of the larger hooks, by removing only the shank pin, the body can be changed readily from the single hook type to the duplex (2-hook) type. BJ weldless links are thus permitted to hang vertically so that the elevator is easily opened or closed, and a uniform load distribution is secured. The two larger hooks are equipped with an enclosed, low-stressed relief spring, having a 5-inch travel, which is strong enough to lift a stand of tubing clear of the collar, thus preventing damage to threads and speeding up operations.

For work-over or perforation-cleaning jobs either side of the duplex hook body can be used to pick up the swivel, and the full rated capacity of the hook is present when used for such purposes. This method is not recommended for continuous drilling operations due to the lost time in operating the locking arms. A straight pull is provided and the swivel bail is securely locked in, safe against accidental "jumping" of the hook, with a heavy, overhanging metal section to take any upward thrust of the swivel bail.

A swivel lock to prevent rotation, and an adapter for direct connection to the block are additional features when specified. All three sizes of these new hooks are shorter in over-all length than the corresponding sizes of previous types—an important feature where overhead clearance is limited in short derricks.

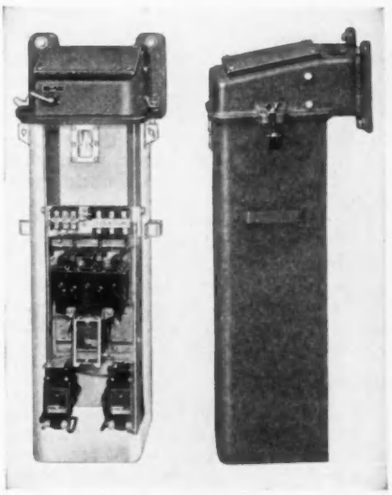
Starters

SQUARE D COMPANY

The industrial Controller Division of the Square D Company, 4041 North Richards Street, Milwaukee, has announced an oil-immersed starter that incorporates design features facilitating installation, service, and operation. A sharp demand has been created due to greatly expanded activity in chemical plants, refineries, powder, and shell loading plants.

Easier installation is provided through use of a cast head with a wiring manifold which permits conduit entrance from five directions. A removable cover plate facilitates the threading of bare wire through an insulating spacer above the oil bath. Many problems usually encountered in servicing oil-immersed equipment have been overcome. The welded seam tank is designed for a minimum quantity of oil. A large window-type oil-level gauge provides quick, clear visibility. The drain cock is recessed in the bottom. Track-type guides prevent swinging, splashing or accidental collision with the starter panel while the tank is being raised or lowered. Hooks at the bottom of the guide track support the tank in lowered position for inspection. All starter parts are readily accessible.

For efficient operation, the magnetic



Square D Starter

IT *MUST* WORK OR ELSE ~ ~ ~

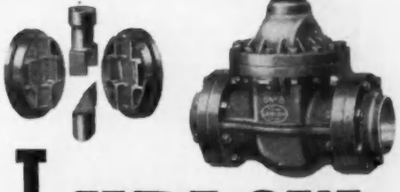
Because a parachute must be ready *all the time* for an emergency, it has to be made *right*. The same is true of valves — especially those located in strategic pipe lines, oil fields and refineries.

Ludlow Valves are always ready for emergencies. Throughout the petroleum industry, thousands of these rugged valves — many installed years ago—are now meeting the most severe tests, successfully! Operating on the famous double-disc, parallel seat principle, developed and perfected by Ludlow, these sturdy valves work smoothly, close securely—whether in action almost continuously or only on rare occasions. In peace or war, *Ludlow means value in valves*. Send for catalog.

THE LUDLOW VALVE MFG. CO., INC.

Troy, New York

Construction Features: **Self-releasing 30° angle wedges and free-floating gates, self-adjusting to seats, afford smooth, trouble-free performance, long service. Rings are cleaned throughout stroke action. Gates are wedge-locked directly opposite ports and completely unwedged before raising. Ample tolerances provide easy action. Simple construction permits easy replacement of parts.**



LUDLOW VALVES

SINCE 1866

UNIBOLT
THE ONE BOLT COUPLING

NO GALLING!
NO FREEZING!

Absence of threads between component parts of UNIBOLT FLEXI-BALL JOINT eliminates this source of trouble found in other types of ball joints.

★

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HOUSTON

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Well Servicing

Patented Portable Derricks and Rigs

With Our Patented Portable Derrick we arrive at your well with complete rig and derrick, ready to service it in the most efficient and economical manner. Our complete portable equipment and experienced personnel assures satisfactory reworking; also tubing pulling, swabbing and bailing.

DAY AND NIGHT SERVICE

You furnish the well . . . Let us do the rest

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BOWEN SOLID LINE WIPER
SAFETY - ECONOMY - UTILITY
DEPENDABILITY
CONVENIENCE

This Line Wiper, as illustrated, is available with or without the remotely controlled Packing Nut Tightener. It is the most versatile line wiping and oil saving device of its kind.

The size with 3" bottom connection will allow tools 1¾" OD to pass through it.

Descriptive literature with complete instructions is packed with every tool.

Patented

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P. O. BOX 1025 HOUSTON, TEXAS
Phones: Odessa, Tex., 660—Midland, Tex., 1419
Through Supply Stores Anywhere in U. S. A.

overload relays are easily adjustable to meet prevailing conditions of application. Either hand or automatic reset relays are available. Removal of the tank from a combination starter automatically throws the breaker to "off" position.

Two kinds of oil-immersed enclosure construction are available: (1) corrosion resisting and (2) explosion resisting for class I, group D hazardous locations. Either kind can be furnished with any of the following four types of motor control equipment:

1. Class 8537 line voltage starters.
2. Class 8539 combination starters.
3. Class 8737 reversing starters.
4. Class 8810 two speed starters.

Flash-Off

ACME WHITE LEAD AND COLOR WORKS

Acme White Lead and Color Works, Detroit, Michigan, has announced Acme Quality Industrial Finish Flash-Off No. 99, designed to eliminate weld spatters and the time cost of removing them, plus giving a stronger, smoother weld.

"The use of Industrial Finish Flash-Off," says the chief chemist of the Acme research and testing laboratories, "is the very essence of simplicity, and desired results are certain. The mechanic simply brushes, sprays, or wipes on Industrial Finish Flash-Off along the edges of the metal surfaces to be joined by the weld. Then when the welding is done, metal chips bounce or fall off instead of adhering to areas adjacent to the seam. This eliminates the necessity of grinding or scratching these chips off. The seam is smoother—and it is also stronger because Industrial Finish Flash-Off removes impurities from the weld, and, being an excellent conductor of electricity, helps prevent the weld arc from breaking. This is the feature that does much in producing a stronger seam."

An additional feature of the new product is its cleansing effect to the surface to which applied. It prevents pitting on galvanized or ungalvanized metal surfaces and permits immediate application of paint without cleaning operations other than wiping off.

The new product will be marketed in 55-gallon drums and 5-gallon cans.

Packers, Hangers

Lane-Wells Company has announced a new bulletin on Olympic packers and liner hangers, cataloging nine types of packers and three types of liner hangers for oil and gas well applications. Outstanding features claimed for the packers, according to type, include: positive controls which makes it possible to set and reset the packer when and where desired; simplified construction; multi-set packing rings; packing ring support sleeve; long tapered dove-tailed slips; cross-cut slips and free-wheeling cage assembly. Applications and specifications are given for flow type packers, for fluid and gas lift operations, and upper packers, for well testings and washing operations.

Bulletins

Oil Well Supply Company, Dallas, Texas, has issued three new "Oilwell" bulletins. They are H1-442—No. 2000-CT combination heads; H2-442—No. 2000 stuffing-box casing head; J2-442—No. 12-A pumping jack.

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You may have surplus used equipment that is urgently needed by some other operator. See the **Used Equipment Forum** column of the new feature:

TRADING POST SECTION

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East Anglia Library

Tough Fishing Jobs—

REQUIRE TOUGH, WELL-BUILT RIGS!

JOHN WHITENER
DRILLING CONTRACTOR
CABLE TOOLS
CENTRALIA, ILLINOIS
515 W. BROADWAY

PHONE 2131

April 20, 1942

Cardwell Manufacturing Company
P. O. Drawer #2001
Wichita, Kansas

Attention Mr. Robert M. Smith, Sales Manager

Gentlemen:

I have noticed that some of your ads have been stressing low upkeep and low maintenance cost on "Cardwell" rigs, and I would like to tell you how well mine has done.

In March 1940, you delivered to me a "Cardwell" Model H. double drum spudder; and in over two years of practically continuous use, I have never purchased a single repair part.

I had one particularly bad fishing job to clean up, where I moved over a hole with two strings of cable tools in it. It took thirty-three days of constant jarring to clean up the fishing job; and if a "Cardwell" spudder ever had a work-out, this was it.

I fully expected to have to repair this rig some day, but there are no indications of weakness or excessive wear yet, and I certainly can't kick on the remarkable service I have had from this rig.

Yours very truly,

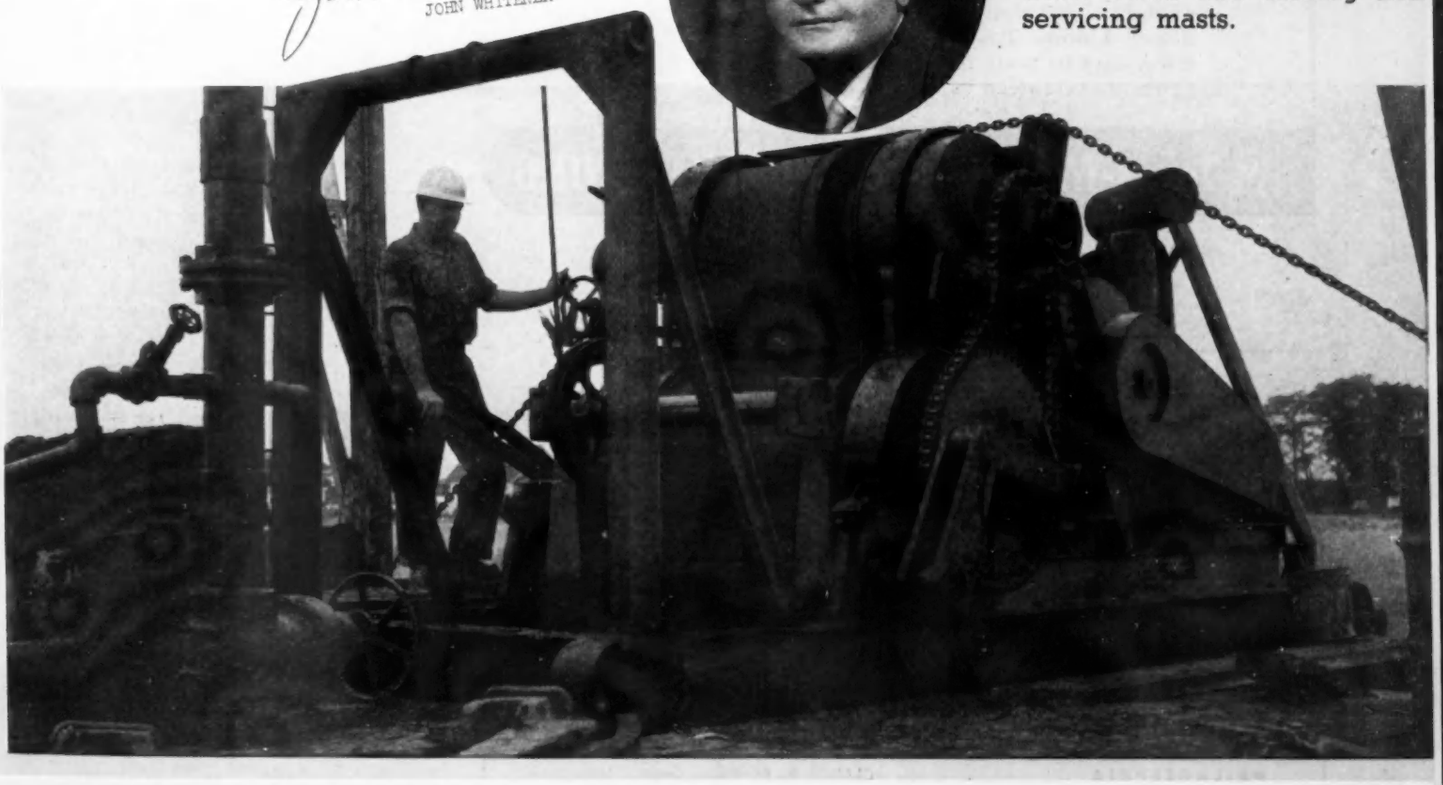
John W Whitener

JOHN WHITENER

John Whitener, Centralia, Illinois, proves that our care in building "Cardwell" rigs pays him big dividends in two ways: First, he gives his customers fast, efficient service on the toughest jobs without down time. Second, his customers keep him busy with more jobs; in fact, so busy he has ordered two more "Cardwells" since the purchase of the first.

Tough, well-built rigs mean low maintenance costs to their owners, and this is one big reason why "Cardwells" are sure money-makers. These precision-built rigs, with all wearing parts heat-treated, reduce down time . . . . . cut maintenance costs to the bone . . . . . and outlast and outperform any in the oil fields today. Add that to their fast, easy operation . . . . . lightweight construction with alloy steels . . . . . compact design that reduces hauling costs . . . . . and you have equipment that owners SAY and PROVE, makes them more real profit than any other make of rig they've ever owned.

Write today; or see our nearest representative for full information on servicing hoists, combination rotary and cable tool drilling rigs, single and twin-engine draw works and drilling and servicing masts.



CARDWELL ALLSTEEL
THIS TRADE MARK INSURES HIGHEST QUALITY AT LOWEST PRICE

CARDWELL MFG. CO. INC.
FORMERLY ALLSTEEL PRODUCTS MFG. CO.
P. O. Drawer 2001 · Cable Addresses: "ALLSTEEL", WICHITA · "CARDSTEEL", NEW YORK
Wichita, Kansas, U. S. A.

"CARDWELL" RIGS ARE STRONGER, WEAR LONGER AND WEIGH LESS

8 Good Tips

on how to make brake lining last longer...

1. **TRUE UP SCORED RIMS**
   before applying brake lining.
2. **BE SURE WATER IS ON WATER-COOLED RIMS**
   before starting to run in drill pipe.
3. **HAVE BRAKES EQUALIZED AT ALL TIMES**
4. **WHEN RELINING BANDS**
   be sure that brake bands are not out of round or kinked.
5. **STONE OR SMOOTH UP**
   badly checked rims before applying lining.
6. **REVERSE BANDS,**
   if live and anchored ends are interchangeable, when anchored end is half worn. This increases life more than 40%.
7. **USE LINING IN SEGMENTAL FORM**
   Such action simplifies application, allows for release of worn particles and permits greater heat dissipation.
8. **DO NOT USE OIL, CLAY**
   or other foreign materials to control friction. This causes gummed brake surfaces, early replacement of lining.

• And be sure you start rigs off right... by using J-M 420 Rotary Lining. Tough, durable, easy to wear in, J-M 420 assures even feed-off, easy load control, high braking efficiency. For details, write for brochure FM-10A. Johns-Manville, 22 East 40th Street, New York, N. Y.

JM Johns-Manville 420 ROTARY LINING

The Bellevue

IS THE GATHERING PLACE

of those who do the important things in business, social and public life. It may be a business meeting, a small dinner, a great banquet, an exclusive party or a number of each at the same hour—the Bellevue embraces them all in the tremendous capacity of its facilities —each with an intelligent service that leaves nothing to be desired.

BELLEVUE-STRATFORD

PHILADELPHIA — CLAUDE H. BENNETT, *General Manager*

LOOKING AHEAD

... with the Editor

Christmas Trees in Marine Fields Require Special Protection

With widespread development of marine drilling and uncovering of many fields in waters of the Texas and Louisiana Gulf Coast, oil companies devote attention to protecting wells from damage by passing boats, hurricanes, and salt water corrosion. Protective devices also include apparatus designed to prevent pollution of waters in case of a blowout or uncontrollable well, being of mutual benefit to operators in stopping wasteage of oil and to people living in the area who depend on fish and oysters for livelihood.

Companies adopt individual plans for protection of wells. Certain oil operators, having company camps and field offices in the fields, build wooden piers and walkways which mushroom in many directions to include all wells. Often, large platforms are constructed at Christmas trees to allow working on wells. Such arrangement involves use of large amounts of creosoted piling elevated to a safe height above water level and sufficiently sturdy to withstand force of storms. Broad walks facilitate access to wells and allow hauling light equipment which is carried by hand.

Some companies having production in marine fields rely on boats to reach wells, eliminating expensive upkeep of piers. Christmas trees are usually protected by small clusters of piling arranged to suit individual taste, often piling from the key-way forming part of the structure. Special superstructure is mounted on the piling bases, some having steel gin poles to expedite running wire line for bottom-hole tests or scraping paraffin. When located in arterial waterways, such structures are painted in contrasting colors to attract attention of boatmen, and at night are equipped with lights for safety.

A pictorial article describing various protective devices for Christmas trees observed in South Louisiana will be published in an early issue of THE OIL WEEKLY, and will include a number of photograph illustrations.

THE OIL WEEKLY, Published every Monday. Entered as second class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.